L 16208-63 BDS

ACCESSION NR: AR3005179 S/0058/63/000/006/E027/E027

SOURCE: RZh. Fizika, Abs. 6 Zh174

AUTHORS: Korobkin, V. A.; Tereshchenko, A. I. 47

TITLE: Retuning of a cavity of triangular cross section by means of a ferrite

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 127, 1962, Tr. Radiofiz. fak. v. 6, 38-42

TOPIC TAGS: Cavity, triangular, ferrite tuning

TRANSLATION: A cavity is considered, made in the form of a segment of triangular waveguide short circuited on the ends. The cross section of such a waveguide is a right isosceles triangle. Perturbation theory is used to derive a formula for the natural frequency with a thin ferrite plate on the end. The calculated data have been confirmed experimentally. In the region of small magnetic fields, under certain conditions (when the field makes angles of 135° with the sides of the triangle), the dependence of the frequency on the magnetic field of the triangular cross section cavity is more linear than that of a rectangular cavity with a ferrite plate on the end. V. Gushchin.

DATE ACQ: 15Jul63 SUB CODE: GE, SP ENCL: 00

Card 1/1

TERESHCHENKO, A.I.; KOROBKIN, V.A.

Small-sized cavity resonators tuned by ferrites. Radiotekh. i elektron. 7 no.6:1044-1045 Je '62. (MIRA 15:6)
(Electric resonators) (Wave guides)

TERESHCHENKO, A.I.; KOROBKIN, V.A.

Calculation of the frequency of a cylindrical resonator with a coaxial ferrate tube. Zhur.tekh.fiz. 32 no.4:419-422 Ap '62. (MIRA 15:5)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Electric resonators) (Ferromagnetism)

KOROBKIN, V. A.

Korobkin, V. A. Reduction of the timber tailing of felling areas to charcoal in portable ovens Sverdlovsk, Gos. nauch.-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1943.

76 p. (49-57864) TP331.K66

KOROBKIN, V. A.

KOROBKIN, V. A. Carbonization; theory and practice. Sverdlovsk, Gos. nauch.-tekhn. izd- vo lit-ry po chernoi i tsvetnoi metallurgii, 1048. 340 p. (49-28444)

TP3331.K67

KOROBKIN, V. A. TA 1/49T6

USSR/Engineering Jun 48
Carbonization
Charcoal

"Most Favorable Temperature for the Supercarbonization of Wood," V. A. Korobkin, Engr, Sci Res Sta of Carbonization and Lumber Chem, 7½ pp

"Stal'" No 6

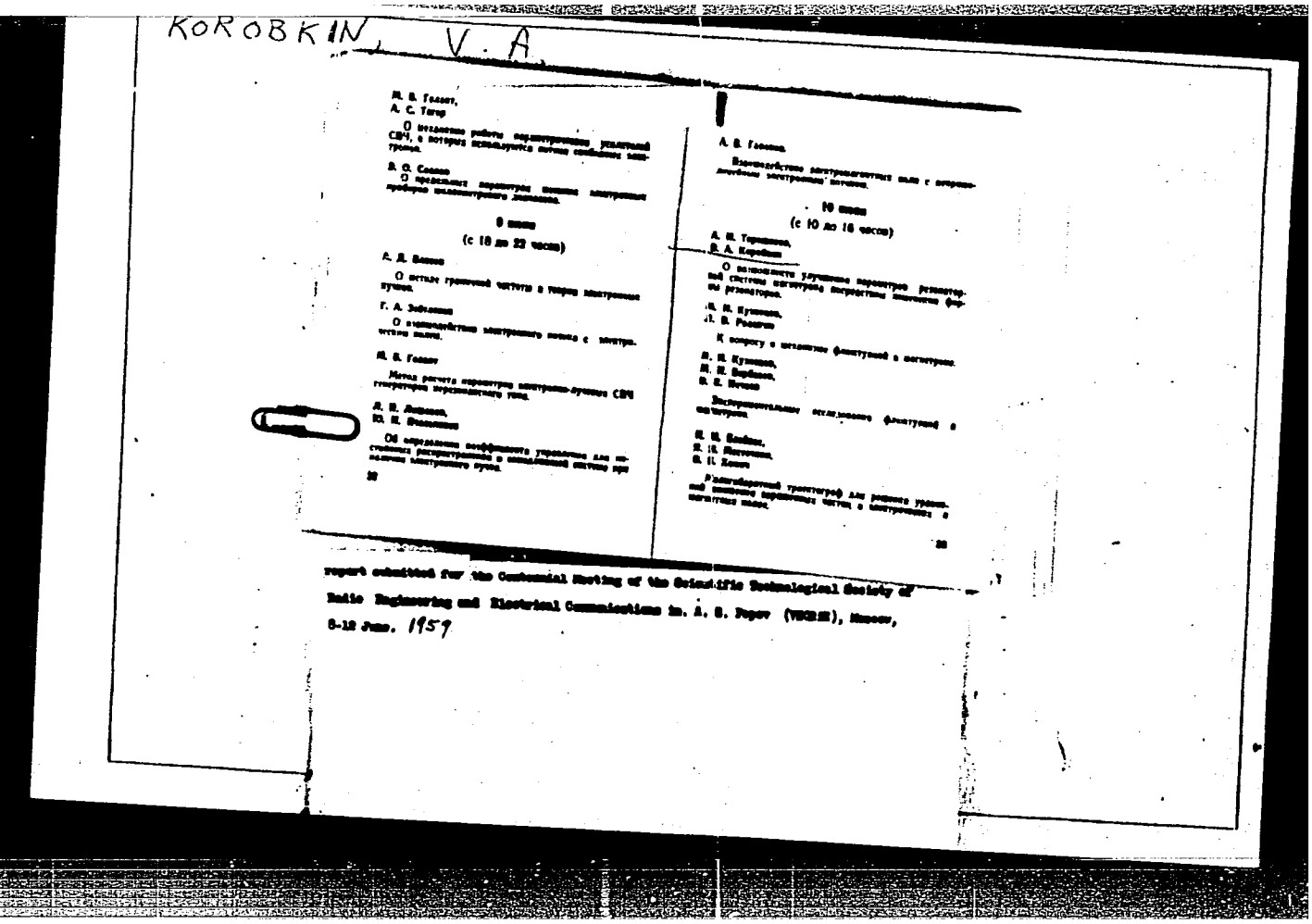
Greatest amount of nonvolatile carbon is obtained in temperature range between 400° and 600°. Suggests that all charcoal be burned at a temperature of 400° since loss of heat and wear of equipment is minimum at this temperature.

1/49T6

Dry distillation of pine stumps. Hubert Kuchs. *Seifen-Öle-Fette-Wachse* **75**, 339-40(1949).—Dry distillation of pine stumps is recommended to increase production of turpentine, charcoal, and MeOH. Maria E. W. Funk

Optimum temperature for carbonization of wood. V. A. Korobkin. *Stal* **8**, 48'-94(1948).—Air-dry pine wood was carbonized for 6 and 12 hrs. at 250-700°. The moisture content of the sample was detd. and the yield of charcoal calcd. on a moisture-free wood basis. Fixed C, volatile matter, and ash were detd. on the charcoal. The yield of fixed C in 12-hr. charring was greater (at any one temp.) than in 6-hr. charring. The yield of fixed C increased with temp. up to 400° and then began to decline. Charring for 12 hrs. with a final temp. of 400° yielded 28% of fixed C dry-wood basis. This charcoal contained fixed C 71.71, volatile substances 27.43, and ash 0.86%.

M. Hosch



KOROBKIN, V. A.

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (NTORIE), Moscow, 8-12 June. 1959

9.1300 (1127)

30102
S/057/61/031/011/017/019
B125/B102

AUTHORS: Tereshchenko, A. I., Korobkin, V. A., and Kovtun, N. M.

TITLE: Possibility of broadening the retuning range of a rectangular cavity with a ferrite

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1388-1391

TEXT: The change in frequency of a rectangular cavity increases with increasing $\lambda_0/\lambda_{cr.}$ ratio if the ferrite plate lies on the side wall, but decreases if it lies on an end face. To check this fact, the authors studied, by a ferrite, the retuning of rectangular cavities having the transverse dimensions 1) 19·10 mm ($\lambda_{cr.}$ = 38 mm); 2) 21·10 mm ($\lambda_{cr.}$ = 42 mm); 3) 23·10 mm ($\lambda_{cr.}$ = 46 mm); 4) 25·10 mm ($\lambda_{cr.}$ = 50 mm). All cavities were calculated for the same resonant frequency with oscillations of the H_{102} type. The 2.4 mm thick ferrite plate was attached either to the side wall or to an end face of the resonator. Figs. 2 and 3 show the frequency dependence on the magnetic field strength for both types of cavities.

Card 1/

Possibility of broadening...

The relative frequency changes of cavities having different transverse dimensions (different $\lambda_{cr.}$) and of those having the transverse dimensions of the standard rectangular waveguide are denoted by $\delta f'$ and δf, respectively. (The critical wavelength of the latter is given by $\lambda_{cr.0}$). In any cases, the resonant wavelength of the empty cavity is λ_0. If the ferrite plate is attached to the side wall, one has $\frac{\delta f'}{\delta f} = \frac{(\lambda_0/\lambda_{cr.})^3}{(\lambda_0/\lambda_{cr.0})^3} = \left(\frac{\lambda_{cr.0}}{\lambda_{cr.}}\right)^3$; if it is attached to an end face, one finds $\frac{\delta f'}{\delta f} = \frac{\left[1-\left(\frac{\lambda_0}{\lambda_{cr.}}\right)^2\right]^{3/2}}{\left[1-\left(\frac{\lambda_0}{\lambda_{cr.0}}\right)^2\right]^{3/2}}$. The losses increase with decreasing cavity width.

Card 2/4 3

9.2571

39436
S/109/62/007/008/015/015
D409/D301

AUTHORS: Tereshchenko, A.I., Korobkin, V.A. and Kovtun, N.M.

TITLE: Modulation and frequency retuning of a rectangular ferrite cavity-resonator by means of a rotating magnetic field

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 8, 1962, 1460-1462

TEXT: It is shown that a constant, rotating, magnetic field can be used for modulation and frequency retuning of a ferrite cavity. Thereby the frequency range of variation increases considerably, and the law of change of the frequency can be made sufficiently close to a sinusoidal law. Using the perturbation method and the expression for the magnetic-permeability tensor, one obtains for a thin ferrite plate, placed at the end of the cavity, the relative frequency variation:

$$\frac{f - f_0}{f} = -\left(\frac{k_x}{k_0}\right)^2 \frac{d}{L} (\mu_\perp \cos^2\varphi + \mu_\parallel \sin^2\varphi - 1), \qquad (3)$$

Card 1/2

where $k_x = n\pi/L$; $k_o = \omega/c$; L denotes the length of the cavity, and d the thickness of the ferrite plate; φ denotes the angle of rotation of the magnetic field H. A figure shows the dependence of f on φ, calculated by formula (3), as well as the corresponding experimental curve; there was good agreement between the calculated and experimental values. Another figure shows the following 3 experimental curves: the dependence of the frequency f on the magnetic field H, directed along the z-axis; the same dependence, with the field directed along the y-axis; the curve f versus φ (as in the first figure). In all cases, the same ferrite plate was used; its dimensions were 23 x 10 x 0.8 mm. Formula (3) shows that, for H_o = const., the frequency of the cavity varies with the angle of rotation φ. Thus, a constant, rotating, magnetic field can be used for modulation and retuning of the cavity-frequency. There are 3 figures.

4

SUBMITTED: March 30, 1962

Card 2/2

9,2571

38469
S/109/62/007/006/017/024
D266/D308

AUTHORS: Tereschenko, A. I. and Korobkin, V. A.

TITLE: Miniature ferrite tuned cavities

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 6, 1962, 1044-1045

TEXT: In order to reduce the dimensions of the cavities π and H type waveguides are considered. A ferrite plate is inserted along the narrow wall and the tuning is achieved by varying the magnetic field H_o. Employing Sedykh's formulas (Izd. vuzov MVO SSSR (Radiotekhnika), 1959, 2, 3, 333) for the electromagnetic field in an H type waveguide the relative frequency change can be derived in the following form:

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$$\frac{f-f_0}{f} = -\frac{\left(\frac{g}{h}\frac{\cos\chi a}{\sin\chi b}\right)^2 d\,(\mu_\perp - 1)}{2\left(\frac{k}{\chi}\right)^2\left[a\left(1+\frac{\sin 2\chi a}{2\chi a}\right)\frac{g}{h}+\left(\frac{g}{h}\frac{\cos\chi a}{\sin\chi b}\right)^2 b\left(1-\frac{\sin 2\chi b}{2\chi b}\right)\right]} \qquad (1)$$

where $X = 2\pi/\lambda_c$, λ_c - cut-off wavelength of the H_{10} mode in the H type waveguide, $k = 2\pi/\lambda_0$, λ_0 - resonant wavelength. $\mu_\perp = \mu - \mu_a^2/\mu$, μ and μ_a - elements of the permeability tensor. In deriving (1) it was assumed that the ferrite plate is thin, i.e. $X\,d \ll 1$. Determining experimentally μ_1 and measuring $\Delta f/f$ both for an H type and a rectangular waveguide for different values of H_0 it is concluded that the tuning range is larger for the H type waveguide. The discrepancy between theoretical and experimental values is small. The unloaded Q was also measured and found much smaller for

Card 2/3

Miniature ferrite tuned ... S/109/62/007/006/017/024
D266/D308

the H type waveguide. There are 2 figures.

SUBMITTED: December 20, 1961

Card 3/3

9,2571

S/057/62/032/004/005/017
B125/B108

AUTHORS: Tereshchenko, A. I., and Korobkin, V. A.

TITLE: Calculation of the frequency of a cylindrical resonator with coaxial ferrite tube

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 4, 1962, 419-422

TEXT: The properties are calculated of a cylindrical resonator (TM_{nm0} oscillations) with a coaxial longitudinal magnetized ferrite tube at the wall. From the Maxwell equations and the boundary condition $E_z = 0$ for $r = a$ the equations

$$\left.\begin{aligned} E_z &= C\left[N_n(k_\perp r) - \frac{N_n(k_\perp a)}{I_n(k_\perp a)} I_n(k_\perp r)\right] e^{\pm in\varphi} = CF_n(k_\perp r)\, e^{\pm in\varphi}, \\ H_\varphi &= -C\frac{i}{k\mu_\perp}\left[\frac{\pm n}{r}\frac{\mu_a}{\mu} F_n(k_\perp r) + k_\perp F_n'(k_\perp r)\right] e^{\pm in\varphi}. \end{aligned}\right\} \quad (7)$$

follow for the ferrite. The equation is

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$$bk\frac{I_n'(kb)}{I_n(kb)}=\frac{\pm n}{\mu_\perp}\frac{\mu_a}{\mu}+bk_\perp\frac{1}{\mu_\perp}\frac{F_n'(k_\perp b)}{F_n(k_\perp b)},$$

$$F_n(k_\perp b)=N_n(k_\perp b)-\frac{N_n(k_\perp a)}{I_n(k_\perp a)}I_n(k_\perp b), \qquad (8)$$

$$F_n'(k_\perp b)=N_n'(k_\perp b)-\frac{N_n(k_\perp a)}{I_n(k_\perp a)}I_n'(k_\perp b).$$

obtained for the dependence of the frequency of the resonator - ferrite tube system of the ferrite parameters and the resonator dimensions. For T_{010} oscillations this equation is

$$\frac{I_1(kb)}{I_0(kb)}=\sqrt{\varepsilon\mu_\perp}\,\frac{1}{\mu_\perp}\,\frac{N_1(k_\perp b)-I_1(k_\perp b)\dfrac{N_0(k_\perp a)}{I_0(k_\perp a)}}{N_0(k_\perp b)-I_0(k_\perp b)\dfrac{N_0(k_\perp a)}{I_0(k_\perp a)}}. \qquad (9).$$

$k = \omega/c$; ε is the dielectric constant of the ferrite, M_z - ferrite magnetization, H_z - external magnetizing field, $k_\perp = k\sqrt{\varepsilon\mu_\perp}$,

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L 10050-63
EDS
ACCESSION NR: AR3000389 S/0058/63/000/004/H025/H025

SOURCE: RZh. Fizika, Abs. 4Zh148

49

AUTHOR: Kovtun, N. M.; Korobkin, V. A.; Tereshchenko, A. I.

TITLE: On the tuning range of a rectangular waveguide cavity tuned with a ferrite

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 121, 1962, Tr. Radiofiz. fak., no. 5, 44-48

TOPIC TAGS: ferrite-tuned waveguide, rectangular cavity

TRANSLATION: The dependence of the tuning of a rectangular waveguide cavity, by means of a ferrite, on the cavity parameters, is investigated. The tuning range is calculated by the perturbation method for the case when the ferrite plate is located 1) on the side wall and 2) on the end of the cavity. It is shown that for case 1), at a constant resonant wavelength, the tuning range increases with decreasing critical wavelength (with increasing wide wall of the waveguide). For case 2), the dependence is reversed. An experimental check is made on 4

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L 10051-63
EDS

ACCESSION NR: AR3000390 S/0058/63/000/004/H025/H025

49

SOURCE: RZh. Fizika, Abs. 4Zh149

AUTHOR: Korobkin, V. A.; Tereshchenko, A. I.; Zakurenko, O. Ye.

TITLE: Retuning of a resonator of cruciform cross section with the aid of a ferrite plate located on the side wall

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 121, 1962, Tr. Radiofiz. fak., no. 5, 49-55

TOPIC TAGS: microwave cavities, cruciform section, tuning range, ferrite slug

TRANSLATION: Calculations are presented for the retuning of a waveguide cavity with cruciform cross section by means of a ferrite plate located on the side wall. The calculation is by the perturbation method assuming a quasi-static internal field in the ferrite. It follows from the calculations that the amount of retuning is proportional to the ratio of the resonant wavelength to the critical wavelength, i.e., it is the larger, the higher the ledge. Therefore a cavity

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ACCESSION NR: AR3000390

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with cruciform transverse cross section should have a large tuning range compared with a rectangular cavity. To check on the calculations, the retuning of a rectangular and cruciform resonator with identical resonant frequency was checked experimentally. The increased tuning range of the cruciform cavity, as compared with the rectangular one, was found to be somewhat less than given by the calculations. Ye. Lebedeva

DATE ACQ: 14May63 ENCL: 00 SUB CODE: PH,SD

cs/ja

Card 2/2

TERESHCHENKO, A.I.; KOROBKIN, V.A.

Cylindrical resonators with a transversely magnetized ferrate unit. Zhur.tekh.fiz. 33 no.2:214-220 F '63. (MIRA 16:5)

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo.
(Electric resonators) (Magnetic fields)

ACCESSION NR: AR4014769 S/0058/63/000/012/H018/H018

SOURCE: RZh. Fizika, Abs. 12Zh125

AUTHOR: Tereshchenko, A. I.; Korobkin, V. A.; Zakurenko, O. Ye.

TITLE: Tuning of H-section resonator by means of ferrite

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962. Tr. Radiofiz. fak., v. 7, 78-85

TOPIC TAGS: H-section resonator, H-section cavity, ferrite tuning, field distribution, Q factor, critical wavelength, frequency variation, frequency tuning

TRANSLATION: Expressions for the Q and for the field distribution in a H-section resonator without ferrite were obtained by calculating the fields in the H-section waveguide. Perturbation theory with the use of the quasistatic approximation of the field inside the

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Card 2/2

KOROBKIN, V.G.

An economy of 23 tons of diesel fuel in three months. Elek. i tepl. tiaga no.6:27-28 Je '57. (MLRA 10:8)

1. Starshiy mashinist depo Lagan Ashkhabadskoy dorogi.
(Locomotives--Fuel consumption)

L 21430-66 FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(h) IJP(c) WG

ACC NR: AP6011498 SOURCE CODE: UR/0386/66/003/007/0301/0303

AUTHOR: Korobkin, V. V.; Leontovich, A. M.; Popova, M. N.; Shchelev, M. Ya.

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

TITLE: Dynamics of the field and generation frequency in a giant pulse of a laser with passive shutter

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 7, 1966, 301-303

TOPIC TAGS: ruby laser, laser pulsation, laser modulation, electromagnetic field

ABSTRACT: The authors have previously investigated (ZhETF v. 48, 78, 1965) the dynamics of the field and the generation frequency experimentally for a laser in the free mode. This paper reports a similar investigation of the dynamics of the field and the generation frequencies in the giant pulse of a ruby laser with passive shutter. The passive shutter used was a cell with a solution of cryptocyanine in ethanol. The initial transmission of the cell was 15% for 6943 Å wavelength. The cell was placed between the flat mirror with reflection coefficient 98% and a ruby crystal 120 mm long and 11.5 mm in diameter. The second mirror, located 50 cm from the first, had a reflection coefficient of 30%. The laser action, initiated

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on the end face and on the 30% mirror, bleached the cryptocyanine solution and a giant pulse developed. The pulse energy was 0.5—0.8 J and the duration was 12 to 15 nsec at the half-power level. The time sweep of the field pattern and the time spectra of the generations were with the aid of an electron-optical converter (EOC) operating in the slit-scanning mode and providing a resolution of 0.5 nsec. Photographs are presented of the scanned generation field on the end of the crystal, of the development of the generation field in the far zone, and the time sweep of the giant pulse as observed with a Fabry-Perot interferometer. The results show that individual small regions, spaced 0.1—1 mm apart, are in operation on the end surface. In each such region is observed a pulse of duration 1.8—4 nsec. The subdivision of the generation region into individual sections can be attributed to the operation of higher-order modes and to the inhomogeneity of the crystal. The beam divergence increases in time from 1.2—1.5' to 20', and this variation of the field must be taken into account in calculations of the power of the field at the focus of a lens. The lasing frequency shifts toward the violet side during the course of generation. This shift amounts to 0.012—0.015 cm^{-1}, and the line width at each instant is ~0.01 cm^{-1}. The observed change in the generation field of the giant pulse of a laser with passive shutter is in good qualitative agreement with the results of the theoretical paper of V. S. Letokhov and A. F. Suchkov (ZhETF v. 50, no. 6, 1966), which pertains to the case of instantaneous Q-switching and not

to the case of a passive shutter. There are no calculations as yet for passive shutters. The change in the generation field is evidence of the change in the transverse of the mode index from low values of the order of 1 to a value of the order of 50. If the axial index does not change, then the increase in frequency, ≈ 0.3 cm^{-1}, which is larger by one order of magnitude than the measured value 0.02 cm^{-1}. The cause of the measured frequency shift is still unclear. The authors thank M. D. Galanin, V. S. Letokhov, and A. F. Suchkov for discussions. Orig. art. has: 3 figures.

[02]

SUB CODE: 20/ SUBM DATE: 22Feb66/ ORIG REF: 002/ OTH REF: 001
ATD PRESS: 4221

Card 3/3 ulk

L 34365-66 EWT(1)/FSS-2 AT

ACC NR: AP6022014 SOURCE CODE: UR/0120/66/000/003/0145/0148

AUTHOR: Korobkin, V. V.; Malyavkin, L. P.; Shchelev, M. Ya.

ORG: Physics Institute, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Stabilized power supply for electron-optical converters with regulated output voltage

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 145-148

TOPIC TAGS: power supply, transistor circuit

ABSTRACT: A power supply for electron-optical converters was designed at the Physics Institute of the Academy of Science USSR in Moscow. The power supply is of modular construction (see Fig. 1) and it has two floating outputs. One output may be continuously varied from 4 to 22 kv at a load current of 250 μamps. The voltage stability is 0.05% and the ripple does not exceed 0.01%. The second output is also variable from 0 to ±250 v. It is intended for electron-optical converters with electrostatic focusing. The voltage stability is 0.1% and the ripple is less than 0.03% at a load current of 500 μamps. The supply has a common rectifier section giving out unregulated voltages of 140, 30, and 50 volts. These are further regulated by transistor-Zener diode regulators and applied to two dc/dc converters. The high voltage output is derived from a voltage doubler circuit at the output of a dc/dc converter. The 250 v output section is a conventional full-wave bridge circuit. The primary power

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UDC: 621.383.6

L 34365-66

ACC NR: AP6022014

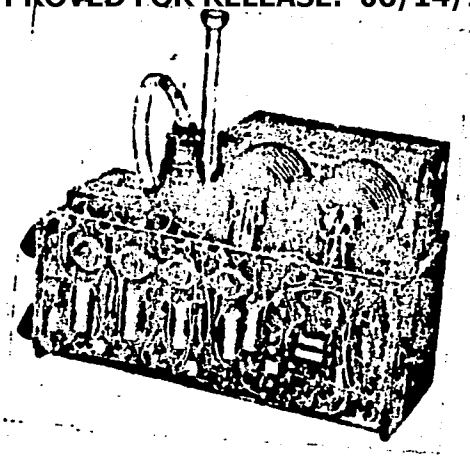

Fig. 1. Power supply module

is a 220 v ±10% source. The weight of one such module is 3 kg. Orig. art. has: 4 figures and 8 formulas.

[BD]

SUB CODE: 09/ SUBM DATE: 31Jul65/ ORIG REF: 004/ ATD PRESS: 5133

Card 2/2

L 45159-66 EWT(1)/EWP(e)/EWT(m /EEC(k)-2/T/EWP(k) IJP(c) WG/AT/WH

ACC NR: AP6031338 SOURCE CODE: UR/0386/66/004/003/0103/0106

AUTHOR: Korobkin, V. V.; Serov, R. V.

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

TITLE: Investigation of the magnetic field of a spark produced by focusing laser radiation

SOURCE: Zh. eksper. i teoret. fiz. Pis'ma v redaktsiyu. Prilozheniye v. 4, no. 3, 1966, 103-106

TOPIC TAGS: laser beam, spark shock wave, discharge plasma, plasma magnetic field

ABSTRACT: The authors have observed the magnetic field of the spark produced when a sufficiently powerful laser beam is focused. This field existed only during the time when the spark plasma was fed by the laser beam. A Q-switched ruby laser was used in the experiment, at a pulse power 2 J and a pulse duration 30 nsec. The magnetic field of the spark was measured with two 2-turn coils. The signals from the two coils, which were disposed in various manners relative to the spark, passed through two different delay lines (cables 20 and 50 m long), amplified by two amplifiers, and displayed on an oscilloscope. The delay-time difference was 150 nsec, so that it was possible to measure simultaneously arbitrarily chosen components of the magnetic fields at two points of space on a single oscillogram. To suppress the photoeffect from the inductive pickups, the spark was surrounded by a tube of black paper of 5 mm

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L 45159-66

ACC NR: AP6031338

inside diameter. In addition, the signal from each pickup was fed to the input of the delay line through a special isolating transformer with a grounded primary-winding center tap to eliminate the pulse due to the photoeffect. The results of the experiments can be summarized as follows: A magnetic dipole moment exists in the spark. This moment is perpendicular to the laser-beam propagation direction. In addition, the direction of the moment depends essentially on the part of the lens through which the beam passes. Similar results are obtained also when part of the beam passing through the center of the lens is obstructed. A magnetic moment appears also when the laser beam passing through the center of the lens is allowed to pass also through a glass wedge with an apex angle 11°. The direction of the magnetic moment is determined by the rotation of the beam prior to the breakdown. If the wedge is replaced by a plane-parallel plate, no magnetic moment is produced. The magnetic moment measured in the experiments was approximately (3-5) x 10^{-2} Oe/cm^2. This dipole is apparently localized on the fornt of the shock wave moving toward the lens, for only in this region does the laser beam interact with the plasma. Supplementary experiments have shown that signals from the pickups are not the result of the crowding out of the earth's magnetic field by the plasma. The mechanism of occurrence of the magnetic dipole is not yet completely clear. It can be assumed that it is due to the turning of the shock-wave front moving towards the lens. The reasons for the turning may be distortion of the ray caustic and inhomogeneity of the angular distribution of the laser radiation. The authors thank S. L. Mandel'shtam for continuous interest and a discussion of the present work, and G. A. Askar'yan and N. K. Sukhodrev for useful dis-

Card 2/3

L 1618-66 EWA(k)/FBD/EWT(l)/EWP(e)/EWT(m)/EEC(k)-2/EWP(i)/T/EWP(k)/EWA(m)-2/EWA(h)
SCTB/IJP(c) WG/WH
ACCESSION NR: AP5023361

UR/0020/65/164/001/0075/0077
621.375.8:539.1.073.3

AUTHOR: Gorbunkov, V. M.; Korobkin, V. V.; Leontovich, A. M.

TITLE: Illumination of a bubble chamber by means of a ruby laser

SOURCE: AN SSSR. Doklady, v. 164, no. 1, 1965, 75-77 and top third of insert facing page 76

TOPIC TAGS: laser, ruby laser, laser illuminator, bubble chamber

ABSTRACT: A concentric-resonator ruby laser (λ = 6943 Å) was used to illuminate particle tracks in a bubble chamber. The experimental setup is shown in Fig. 1 of the Enclosure. The resonator consisted of dielectric-coated, concave spherical mirrors with a transmission of ~1% and 50-cm radii placed at a 100-cm distance. The ruby rod, 75 mm long and 9 mm in diameter, was pumped by 0.1-j pulses approximately 0.6 msec in duration from a 4-kj IFK-1500 flash lamp. The laser beam was uniformly distributed with an ~2° angular divergence which was magnified by an f = 50 mm lens to 20°. The experiments were carried out on a bubble chamber model consisting of a plane-parallel plate filled with air bubbles which corresponded to a 25 cm hydrogen bubble chamber described elsewhere (T. D. Blokhintseva, et al, Pribory i

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L 1618-66
ACCESSION NR: AP5023361

tekhnika eksperimenta, no. 5, 51, 1962). The test object T was placed 50 cm from the lens O and was illuminated by a concave spherical mirror M_0 (radius of curvature, 65 cm; diameter, 23 cm) placed 70 cm from O. The laser-illuminated bubble tracks were photographed from a distance of ~50 cm with an f = 53 mm camera on a film with a 70 line/mm resolving power. The excess light was filtered by a combination of an interference filter at λ = 694 mμ with a 30% transmission and a neutral filter with an 11% transmission. The test object was photographed 5 times at different camera angles. The results indicate that the use of a laser illumination system without a filter makes it possible to record bubbles up to 0.06 mm in diameter in hydrogen. Small bubbles in larger chambers (e.g., Wilson's chamber) can be recorded at higher generation energies. Recording at reduced energies can also be effective in cases where low-sensitivity, high-resolution film is used for better contrast and accuracy. Orig. art. has: 1 formula and 2 figures.

[YK]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences SSSR); Moskovskiy fiziko-tekhnicheskiy institut (Moscow Physicotechnical Institute)

SUBMITTED: 15Jan65 ENCL: 01 SUB CODE: EC,NP

NO REF SOV: 005 OTHER: 003 ATD PRESS: 4095

Card 2/3

L 1618-66

ACCESSION NR: AP5023361

ENCLOSURE: 01

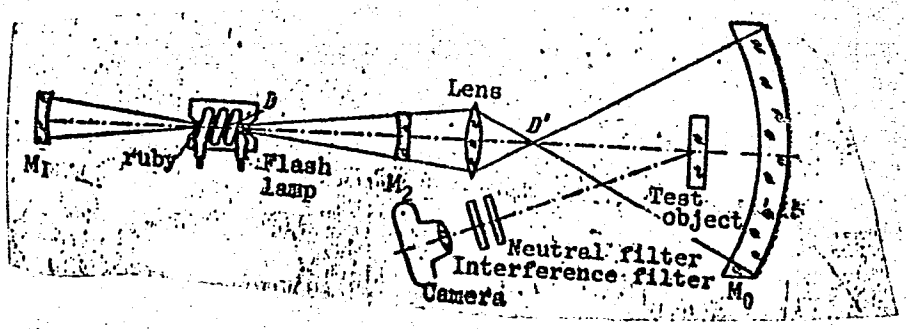


Fig. 1. Diagram of systems for illumination and photography of bubbles

Card 3/3

L 26950-65 EWG(j)/EWA(k)/FBD/EWT(l)/EWP(e)/EWT(m)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/
ACCESSION NR: AP5004377 EWA(m)-2/EWA(h) Pn-4/Po-4/Pf-4/Pe4/P1-4/P1-4
IJP(c) WH/WC S/0056/65/048/001/0078/0086

AUTHOR: Korobkin, V. V.; Leontovich, A. M.; Smirnova, M. N. 44 B

TITLE: Excitation of modes and the kinetics of generation in a ruby laser with a confocal resonator

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1965, 78-86

TOPIC TAGS: ruby laser, laser generation, generation kinetics, mode excitation

ABSTRACT: An investigation is made of mode excitation in a ruby laser with a confocal resonator (filled with external spherical dielectric coated mirrors) under various generating conditions. The mirrors had radii of curvature of 30 or 50 cm; the distance between them was 60 or 100 cm. The polished ruby rod (0.015% Cr) was 75 mm long, 10 mm in diameter, and had plane-parallel ends. The rod was pumped by an IFK-1500 xenon lamp supplied from a 900 uf bank of condensers; the pumping energy was from 1.3 kj (threshold) to 4 kj. The field distribution pattern in the resonator was obtained by means of

Card 1/2

L 26950-65

ACCESSION NR: AP5004377

an SFR-2M photorecorder; an IT-51-30 Fabry-Perot interferometer with dielectric mirrors was used in obtaining the emission spectrum. Coherence was studied from the Fraunhofer diffraction through two openings 0.3 mm in diameter and 11.5 mm apart on a diaphragm placed behind the resonator mirror. The emitted radiation was found coherent throughout the entire resonator, i.e., in a confocal resonator modes are excited simultaneously in the entire resonator. A great number of transverse modes are excited under regular conditions with damping. Fewer modes indicate a less regular generation. In order to achieve regular damped generation, conditions for the excitation of a great number of low-Q modes must be provided, and the higher-Q modes must have a lower volume of excitation. Irregular generation is achieved essentially when modes with different Q are excited. Orig. art. has: 3 formulas and 5 figures. [YK]

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

SUBMITTED: 08Jul64 ENCL: 00 SUB CODE: EC

NO REF SOV: 008 OTHER: 009 ATD PRESS: 3180

Card 2/2

L 2543-66 EWT(d)/EWT(l)/EPA(s)-2/EPF(c)/EEC(k)-2/ETC/EWG(m)/EWP(v)/EPA(w)-2/
T/EWP(k)/EWP(h)/EWP(l)/EWA(h) IJP(c) TT/WW/AT

ACCESSION NR: AP5021345 UR/0120/65/000/004/0129/0133
621.383

AUTHOR: Korobkin, V. V.; Malyavkin, L. P.; Shchelev, M. Ya. 60 57 B

TITLE: Control circuit based on electron-optical pulse converters 75

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 129-133

TOPIC TAGS: image converter, electronic scan, automatic control equipment 14, control circuit

ABSTRACT: A control circuit based upon electron-optical pulse converters is described. The device permits amplification of image clarity so as to obtain still photographs and linear scanning of rapidly occurring processes. The image recording process features a time of frame exposure and scan duration covering a range of 0.3 to 10 microseconds. Projection can occur simultaneously with the occurrence of the investigated process or after a delay of 3 microseconds to 3 milliseconds. The operating frequency of the device is 50 cps, and the device is capable of a resolution of 30 lines/mm at the center of the frame and 20 lines/mm at the edges. The maximum scan speed is on the order of 10^8 mm/sec. The basic unit is a generator of pulses which comprise the shutter control. These pulses are formed into a sawtooth voltage

Card 1/2

L 2543-66

ACCESSION NR: AP5021345

3

for an aperture control generator. A detailed description of the purpose and manner of generation of the sawtooth voltage is given. The discussion is related to the hardware components of the control circuit which are shown in a circuit diagram. Various possible potentials at the shutter aperture are shown on oscillographs and are discussed. A sample photograph is presented to demonstrate the resolution capability of the device. The authors thank Yu. F. Baryshnikov and A. I. Parshin for their participation and assistance in the work. Orig. art. has: 5 figures. [04]

ASSOCIATION: Fizicheskiy institut AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 26Dec64 ENCL: 00 SUB CODE: EC, ES

NO REF SOV: 009 OTHER: 002 ATD PRESS: 4109

Card 2/2 Hd

L 62251-65 EWA(k)/FBD/EWT(l)/EWP(e)/EWT(m)/EEC(k)-2/EWP(i)/T/EEC(b)-2/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c) WG/WH

ACCESSION NR: AP5019209 UR/0056/65/049/001/0010/0015

AUTHOR: Korobkin, V. V.; Leontovich, A. M. 44

TITLE: Beats between oscillation modes in a ruby laser

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 10-15

TOPIC TAGS: laser, ruby laser, laser resonator, resonator mode, beat frequency, intensity modulation

ABSTRACT: An SFR ultra-speed camera was used to investigate the high-frequency modulation of individual ruby laser spikes. In none of the earlier investigations of this effect was a thorough study made of the connection between the observed modulation frequency and the frequency theoretically calculated on the basis of the known resonator dimensions and configuration. The present study was made at frequencies lower than $c/2L'$ (c = speed of light, L' = resonator optical path length), using a semi-confocal resonator consisting of a spherical mirror (100 cm radius) and a flat mirror in the focus of the spherical one. The distance between mirrors was 50 cm. The optical system used for the measurement was similar to that described by one of the authors (Leontovich, with A. P. Vedute, ZhETF v. 46, 71, 1964). Discrimination between the angular modes was effected with a special diaphragm placed inside the resonator. The order of the transverse mode increased

Card 1/2

L 62251-65

ACCESSION NR: AP5019209

4

with increasing diaphragm diameter. In addition to the confocal mirror system, a plane-parallel resonator, consisting of reflecting coatings deposited directly on the ends of the crystal, was also tested and the frequency distribution of beats in the various modes determined. The results indicate that high-frequency modulation of the intensity in individual spikes is due to beats between the different modes. The beat frequency is greatly affected by the distortion due to inhomogeneities produced in the ruby crystal by heat. The most likely beat frequencies are estimated on the basis of an analysis of the most likely combinations of longitudinal and transverse modes excited simultaneously in the spike. The bandwidths of the individual modes were estimated from the beat frequencies and found not to exceed 2 Mcs. "The authors thank M. D. Galanin for continuous interest and a discussion." Orig. art. has: 5 figures and 5 formulas. [02]

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

SUBMITTED: 28Dec64 ENCL: 00 SUB CODE: EC

NO REF SOV: 005 OTHER: 013 ATD PRESS: 4075

Card 2/2

L 10726-63 EWA(k)/EWT(l)/EWP(q)/EWT(m)/FBD/BDS/T-2/SW2/EEC(b)-2/
ES(t)-2 AFFTC/ASD/ESD-3/RADC/AFGC/AFWL Pl-4/Po-4 IJP(C)/WH/HG/K/JHB/EH
ACCESSION NR: AP3003109 S/0056/63/044/006/1847/1851

AUTHOR: Korobkin, V. V.; Leontovich, A. M.

88
15 25 83

TITLE: Coherence and time scan of radiation spectra of a ruby laser

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1847-1851

TOPIC TAGS: laser emission coherence, laser radiation spectra, laser mode excitation, ruby lasers, axial modes in ruby

ABSTRACT: An experiment has been conducted to determine the time dependence of mode excitation under pulse operation. For this purpose, the coherence and time scan of output radiation were investigated in ruby crystals at room temperature and -165C. The coherence was investigated by observation of the interference pattern with a Michelson-type interferometer in which one of the mirrors was replaced by a prism, so that the mirror and prism images were superimposed on film. The interference pattern observed on the film confirmed that each mode was coherent with respect to the others and

Card 1/3

L 10726-63

ACCESSION NR: AP3003109

propagated in different directions. Contrary to A. L. Schawlow and others (A. L. Schawlow, C. H. Townes. Phys. Rev., 112, 1940, 1958; A. G. Fox, T. Li. Bell. Syst. Techn. J., 40, 453, 1961), this supports the view that the wave front is not a plane wave. The coherence of radiation emerging from different points of the ruby face was demonstrated by inserting a lens at its focal distance from the face, an arrangement which produced two images over the entire face superimposed on the film. The interference phenomena were best observed at a pumping energy only slightly above the threshold (not more than 2%). At higher energies the pattern became indistinct. The time scan showed a discrete number of directions diverging at a general angle up to 30 to 40 min. At a crystal temperature of -165C the scan displayed a nearly perfect regularity of oscillation pulses, and the discreteness of directions of propagation was less pronounced. Oscillations appeared at several frequencies, apparently in axial modes. The room-temperature time scan of the spectra, carried out by photographing the emission from a vertical strip of the face, showed that 5 to 8 axial modes were generated simultaneously at a spectral interval of 0.3 cm^{-1}. At -165C, 3 to 4 axial modes were generated with high background

Card 2/3

ACCESSION NR: AP3003109

frequencies. All points of the face were found to emit at the same frequencies. The 30- to 40-min magnitude of the overall divergence, which cannot be explained by optical inhomogeneities of the crystal or by dispersion of light in it, is thought to be caused by a change of the refractive index of the crystal within the R_1 line owing to a change in the population of the upper level. Modulation of the optical length of the crystal during the pulse might also lead to modulation of the emission frequency, which would explain the presence of background radiation between the axial modes observed a crystal temperature of -165C.

"The authors express their thanks to M. D. Galavin for discussion, V. N. Lukavin for making the optical parts, and V. N. Smorchkov for making available the laser device, as well as to A. P. Veduta for helping in the work." Orig. art. has: 4 figures and 1 formula.

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

SUBMITTED: 19Jan63 DATE ACQ: 23Jul63 ENCL: 00
SUB CODE: 00 NO REF SOV: 002 OTHER: 008

Card 3/3

L 12922-66 EWT(m) IJP(c)

ACC NR: AP6000952 SOURCE CODE: UR/0286/65/000/022/0039/0039

44,55 44,55 44,55 44,55

AUTHORS: Galanin, M. D.; Gorbunkov, V. M.; Delone, N. B.; Korobkin, V. V.; Leontovich, A. M.; Saitov, I. S.

44,55 44,55

ORG: none

TITLE: A method for illuminating particle tracks in chambers for the visual observation of tracks. Class 21, No. 176332

19,55,44

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 39

TOPIC TAGS: laser, particle track, coherent light

ABSTRACT: This Author Certificate presents a method for illuminating the particle tracks in chambers for visual observation of tracks by pulsed light radiation. To increase the accuracy of the physical experiment, an optical quantum generator (laser) with confocal resonators is used for illuminating.

SUB CODE: 14/ SUBM DATE: 18Jun64

Card 1/1 HW

UDC: 621.375.8:539.1.073.8

S/057/63/033/003/016/021
B104/B180

AUTHORS: Korobkin, V. V., and Malyavkin, L. P.

TITLE: On the use of a superorthicon to obtain images time-scanned [illegible]

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 3, 1963, 360 - 365

TEXT: Study is made in connection with the investigation of very high-speed processes. In the image-transfer section between photocathode and target scanning is accomplished by a saw-tooth magnetic field which perpendicular to the superorticon axis. By calculating the magnetic field strength necessary for this scanning it is shown that non-linearity of scanning does not exceed 0.5 % if the magnetic field varies linearly. The electron defocusing caused by the deflecting field on the target edge is not greater than 0.05 mm. The method was put into practice in an apparatus for recording pulsed discharge spectra, using the superortican as a time-shutter also, for which purpose a negative voltage was only supplied to the photocathode when a spectrum was recorded. There are

Card 1/2

S/057/63/033/003/016/021
B104/B180

On the use of ...

2 figures.

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

SUBMITTED: March 13, 1962

Card 2/2

KOROBKIN, V.V.; USPENSKIY, A.V.

Theory of pulsations of the radiation from a ruby-operated laser. Zhur. eksp. i teor. fiz. 45 no.4:1003-1008 O '63. (MIRA 16:11)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.

KOROBKIN, V.V.; LEONTOVICH, A.M.

Beats between types of oscillations (modes) in a ruby laser. Zhur.eksp.i teor.fiz. 49 no.1:10-15 Jl '65. (MIRA 18:8)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

ACCESSION NR: AT4025291 S/0000/63/000/000/0036/0041

AUTHOR: Korobkin, V. V.

TITLE: Possible use of lasers for plasma diagnostics

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 36-41

TOPIC TAGS: plasma, plasma diagnostics, plasma diagnostics with laser, plasma interferometry, Fabry Perot interferometer, electron density threshold, Thomson scattering by plasma, scattering line width, electron temperature, signal to noise ratio

ABSTRACT: Two methods of plasma diagnostics with a laser are considered. One is to use lasers (preferably gas) as a light source for plasma interferometry with a Fabry Perot etalon and an electron-optical converter receiver. The minimum observable electron density is estimated for this method to be 8.7×10^{12} cm^{-3}. It is also pos-

Card 1/2

SUB CODE: PH NO REF SOV: 005 OTHER: 005

Card 2/2

KOROBKINA, G., kand. tekhn. nauk; MINSKIY,K.; LYADOVA, V.N., red.; EL'KINA, E.M., tekhn. red.

[From wonderful earcorn]Iz chudesnogo pochatka. Moskva, Gostorgizdat, 1963. 98 p. (MIRA 16:10)
(Corn (Maize))

KOROBKINA, G.S.

[redacted]

USSR

Effect of antioxidants on the stability of certain fats and fat-containing food products during storage. G. S. Korobkina (Nutrition Inst., Acad. Med. Sci. U.S.S.R., Moscow). *Voprosy Pitaniya* 13, No. 6, 33-8(1954).—Data are presented on the antioxidative properties of β-naphthol (comparative substance), white streptozide, vitamin E (I), carotene (from carrots) (II), *o*-aminobenzoic acid (III), mixts. of tyrosine + Na_2SO_3, II + $Na_2S_2O_4$, II + vitamin D (IV), II + I, II + I + IV, and II + Na_2SO_3, and the whole meals (flours or rawly ground seeds, including seedlings) of germinated summer wheat, barley (V), oats (VI), and soybeans (VII), resp. The antioxidants were added to a hydrogenated fat, margarine, and plum-seed oil, and the corresponding mixts. were then stored at 85–90° and 75% relative air humidity; after each 12 hrs. the mixts. were examd. for peroxide no., acid no., aldehydes, as well as for the taste, color, and flavor. It was found that storage stability decreases from the solid hydrogenated fat to the liquid plum-seed oil; that the most effective antioxidants are germinated seeds of VI and V; that the next most effective antioxidants, are (in the order of decreased effect) the meal of the germinated VII, II + Na_2SO_3, II + $Na_2S_2O_4$, and III; that a similar effect is obtained when the antioxidants are added to the fat-contg. foods (pastry, cookies); that the meals of the germinated seeds of V, VI, and VII when added to fats and fat-contg. foods in the amts. of 1.4–1.8% and 3% (on the abs. dry wt. of the seeds) increase the storage stability of the fats and foods 1.5–2 and 2–3 times over the control (the same fats and foods stored without any antioxidant added) and slightly over the effects of 0.01% β-naphthol and 0.1% III, resp.

E. Wierbicki

KOROBKINA, G. S.

."Effect of Antioxidants on the Endurance of Crackers (Biscuits) in Storage." Sub 24 Dec 51, Moscow Inst of Soviet Cooperative Trade

Dissertations presented for science and engineering degrees in Moscow during 1951. Cand. Technical Sci.

SO: Sum. No. 480, 9 May 55

Korobkina G. S.

USSR/Medicine - Nutrition

Card 1/1 Pub. 141-3/15 FD-1756

Author : Korobkina, G. S. and *Bessonov, S. M., Cand Tech Sci

Title : The preparation of dry feeding mixtures for children

Periodical : Vop. pit., 13-17, Jan/Feb 1955

Abstract : Prepared some gruels from rice, oats, and buckwheat. Analyzed the filtrate of the gruel for comparison with the original grain, and found the greatest loss in dry matter to consist of starch and nitrogenous substances. Obtained much better results and with less cooking time by using the flours of the above grains. Two tables; two graphs. No references.

Institution: Division of Food Technology (*Head) Institute of Nutrition, Academy of Medical Sciences USSR, Moscow

Submitted : --

POLTEVA, Yu.K., kand.med.nauk, zasluzhennyy vrach RSFSR; KOROBKINA, G.S., kand.tekhn.nauk; SEMENOVA, N.L., red.; GOTLIB, E.M., tekhn.red.

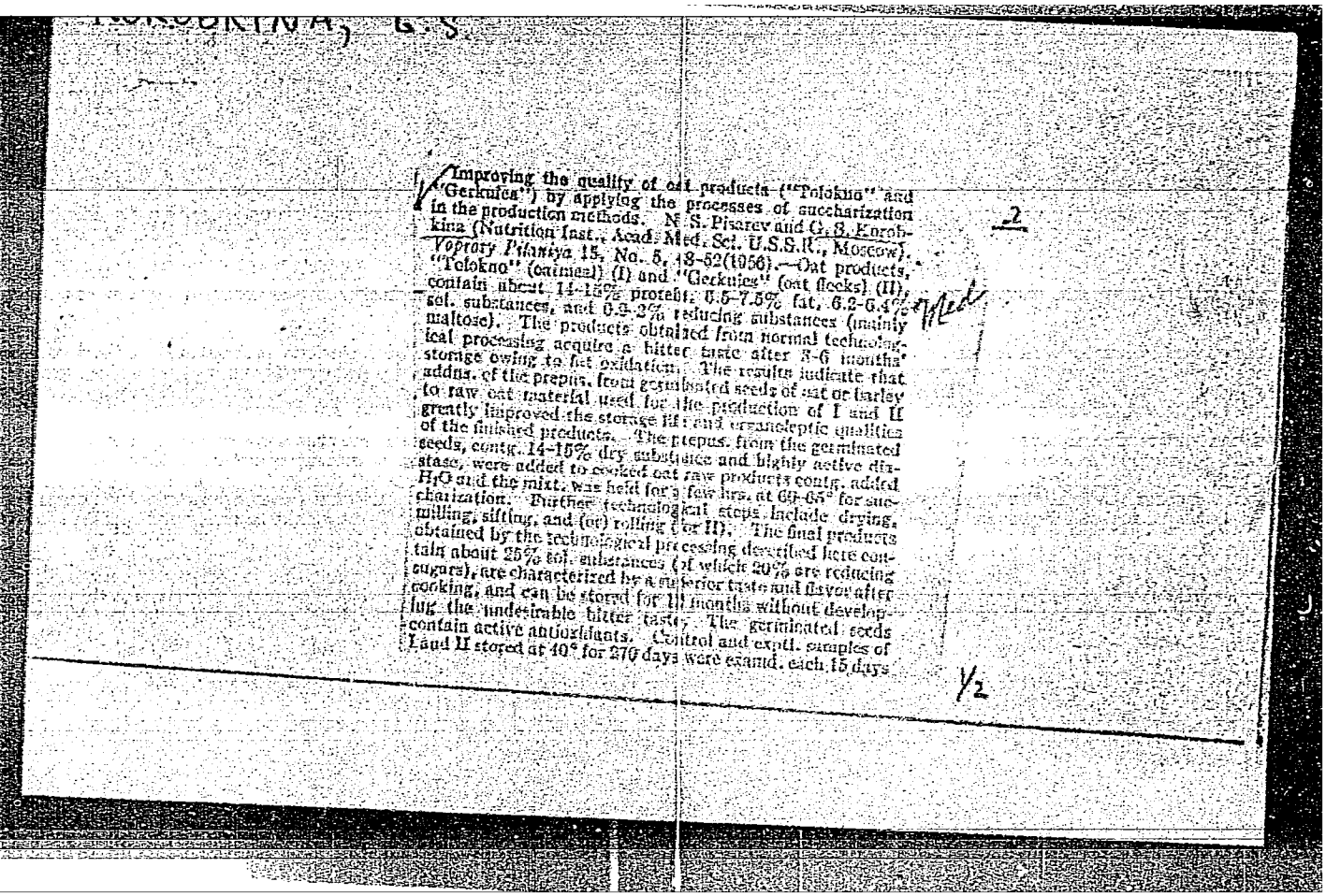
[New products for children under one year] Novye produkty dlia detei v vozraste do 1 goda. Moskva, Pishchepromizdat, 1956. 15 p.

(INFANTS--NUTRITION) (MIRA 14:1)

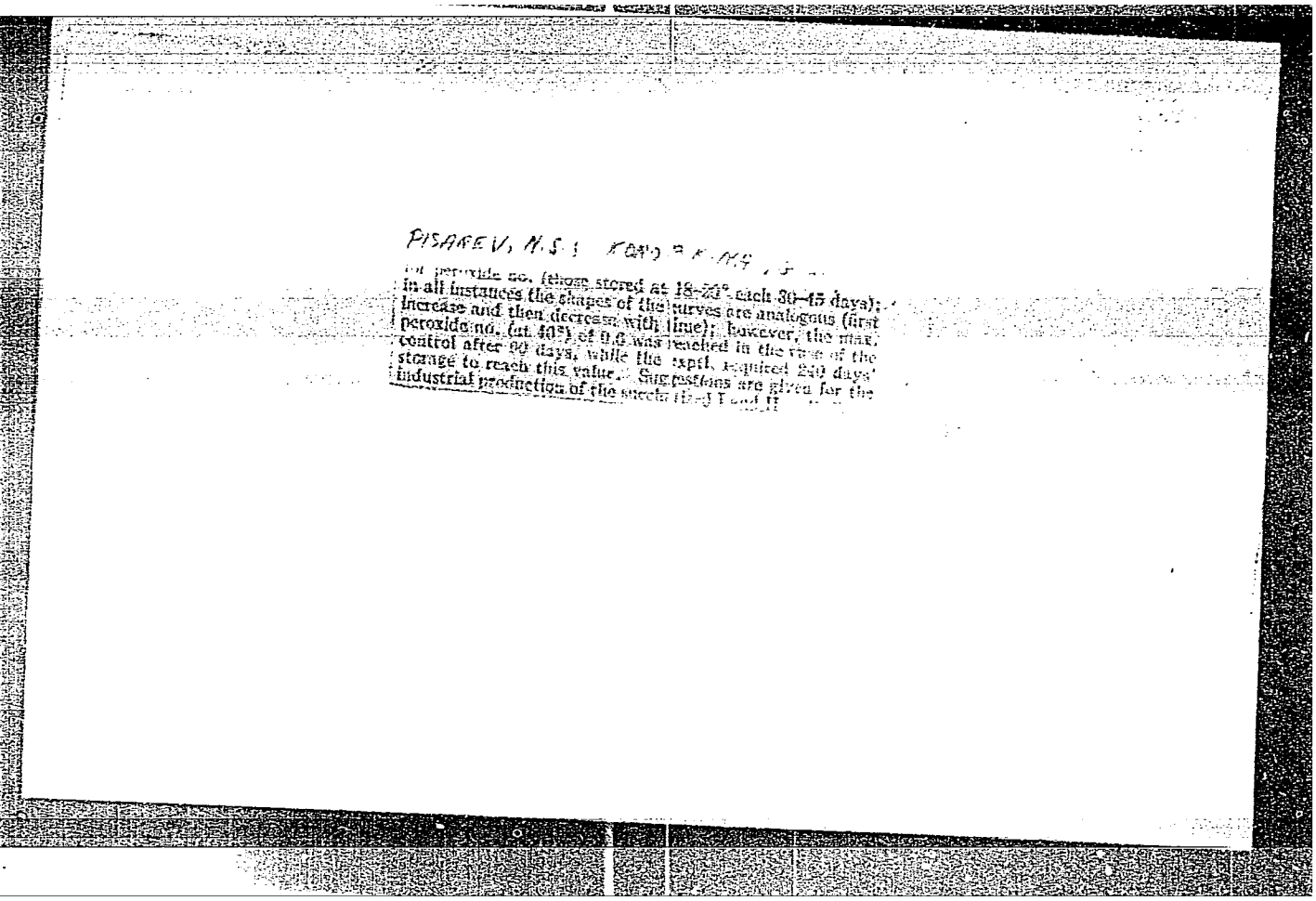
KOROBKINA, G.

New products for the youngest. Sov. torg. no.7:25-27 Jl '56.
(MLRA 9:10)

(Cookery (Baby foods))



Improving the quality of oat products ("Polokno" and "Gerkules") by applying the processes of saccharization in the production methods. N. S. Pisarev and O. S. Korobkina (Nutrition Inst., Acad. Med. Sci. U.S.S.R., Moscow). *Voprosy Pitaniya* 15, No. 5, 48-52(1956).—Oat products, "Polokno" (oatmeal) (I) and "Gerkules" (oat flocks) (II), contain about 14-15% protein, 6.5-7.5% fat, 6.2-6.4% sol. substances, and 0.9-2% reducing substances (mainly maltose). The products obtained from normal technological processing acquire a bitter taste after 3-6 months' storage owing to fat oxidation. The results indicate that addns. of the prepns. from germinated seeds of oat or barley to raw oat material used for the production of I and II greatly improved the storage life and organoleptic qualities of the finished products. The prepns. from the germinated seeds, contg. 14-15% dry substance and highly active diastase, were added to cooked oat raw products contg. added H_2O and the mixt. was held for a few hrs. at 60-65° for saccharization. Further technological steps include drying, milling, sifting, and (or) rolling (for II). The final products obtained by the technological processing described here contain about 25% sol. substances (of which 20% are reducing sugars), are characterized by a superior taste and flavor after cooking, and can be stored for 10 months without developing the undesirable bitter taste. The germinated seeds contain active antioxidants. Control and expti. samples of I and II stored at 40° for 270 days were examd. each 15 days



PISAREV, N.S.

peroxide no. (those stored at 18–20° each 30–45 days); in all instances the shapes of the curves are analogous (first increase and then decrease with time); however, the max. peroxide no. (at 40°) of 9.0 was reached in the case of the control after 90 days, while the expt. required 240 days' storage to reach this value. Suggestions are given for the industrial production of the specialty [illegible]

KOROBKINA, G.S., kandidat tekhnicheskikh nauk

New baby foods. Pediatriia no. :37-40 Jl '57. (MIRA 10:10)

1. Iz otdela pishchevoy tekhnologii Instituta pitaniya AMN SSSR.
(INFANTS--NUTRITION)

KOROBKINA, G., kand.tekhn.nauk

New products from milk. Obshchestv. pit. no.1:51 '57. (MIRA 11:4)
(Dairy products)

KOROBKINA, G., S., kand. tekhn. nauk, nauchnyy sotrudnik.

New foods for special diets. Obshchestv. pit. no.3:51 '57.
(MIRA 11:3)

1. Institut pitaniya AMN SSSR.
(Cookery for the sick)

USSR/Human and Animal Physiology. Metabolism. Nutriton. T-2

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55311.

Author : Korobkina, G.S.
Inst :
Title : New Baby Food Products.

Orig Pub: Pediatriya, 1957, No 7, 37-40.

Abstract: New milk products are recommended, as well as homogenized vegetable preserves, fruits, powdered vegetables and thick soups. Also recommended are new vitamin preparations.

Cardq : 1/1

KOROBKINA, G.S.

KOROBKINA, G. S.

LOBANOV, D.I.; KOROBKINA, G.S.; MORDKOVICH, M.S.

Homogenized vegetable purée as a product used in therapeutic diets [with summary in English]. Vop.pit. 16 no.5:84-87 S-O '57. (MIRA 11:3)

1. Iz tekhnologicheskoy laboratorii (zav. - prof. D.I.Lobanov) Instituta pitaniya AMN SSSR i eksperimental'nogo konservnogo zavoda (glavnyy inzhener M.S.Mordkovich) Vsesoyuznogo nauchno-issledovatel'skogo instituta konservnoy i ovoshchesushil'noy promyshlennosti, st. Biryulevo Moskovskoy oblasti.

(VEGETABLES,
homogenized purée in diet ther. (Rus))

KOROBKINA, G.S., kandidat tekhnicheskikh nauk

New foodstuffs for infants. Sov.zdrav. 16 no.8:46-50 Ag '57.
(MLRA 10:10)

1. Iz Instituta pitaniya Akademii meditsinskikh nauk SSSR.
(FOOD
new food stuffs for inf. in Russia)
(INFANT NUTRITION
same)

KOROBKINA, G.S., kand.tekhn.nauk

Food value of rabbit meat. Obshchestv. pit. no.2:34-36 F '58.
(MIRA 11:3)
(Rabbits) (Cookery (Rabbits))

KOROBKINA, G., kand. tekhn. nauk, nauchnyy sotrudnik

Cottage cheese and porridge for diet therapy. Obshchestv. pit. no. 6:58- Je '58. (MIRA 11:7)

1. Institut pitaniya AMN SSSR.
(Cookery for the sick)

KOROBKINA, G., kand. tekhn. nauk, nauchnyy sotrudnik

Diet for ulcer sufferers. Obshchestv. pit. no. 7:22-24 Jl '58.
(MIRA 11:7)

1. Institut pitaniya AMN SSSR.
(Cookery for the sick)
(Peptic ulcer)

KOROBKINA, G.S.; DINERMAN, A.A.; KAZAKOVA, Z.A.

First session on the problem of "Fat in nutrition." Vop.pit. 17 no.6:79-82 N-D '58. (MIRA 12:2)
(FAT)

KOROBKINA, G.S., kand.tekhn.nauk

Oat products. Zdorov'e 5 no.12:29 D '59. (MIRA 13:4)
(OATS)

KOROBKINA, G., nauchnyy sotrudnik, kand.tekhn.nauk

What should be known about preserved food. Obshchestv.pit. no.10: 20-22 O '59. (MIRA 13:4)

1.Institut pitaniya Akademii meditsinskikh nauk.
(Food--Preservation)

KOROBKINA, G., nauchnyy sotrudnik, kand.med.nauk

Canned food for children. Obshchestv.pit. no.11:29-30
N '59. (MIRA 13:3)

1. Institut pitaniya AMN.
(Food, Canned) (Infants—Nutrition)

LOBANOV, D.I.; KOROBKINA, G.S.; BEYUL, Ye.A.; NAUMOVA, L.V.

Improvement of diets for peptic ulcer patients through various technological methods of food processing. Zhur.ob.biol. 20 no.2:77-81 Mr-Ap '59. (MIRA 12:5)

1. Iz tekhnologicheskoy laboratorii (zav. - prof.D.I.Lobanov) i otdeleniya zheludochno-kishechnykh zabolevaniy (zav. - prof. O.L.Gordon [deceased]) kliniki lechebnogo pitaniya AMN SSSR, Moskva.

(DIETS, in var. dis.
peptic ulcer (Rus))
(PEPTIC ULCER, ther.
dietother. (Rus))

KOROBKINA, G., kand.tekhn.nauk, nauchnyy sotrudnik; GLUSHNEVA, Z., inzh.-tekhnolgo

Diet in arteriosclerosis. Obshchestv.pit. no.1:49 Ja '60. (MIRA 13:5)

1. Institut pitaniya AMN SSSR (for Korobkin).
(Diet in disease) (Arteriosclerosis)

KOROBKINA, G., nauchnyy sotrudnik; GLUSHNEVA, Z., inzh.-tekhnolog

Diet in arteriosclerosis. Obshchestv.pit. no.2:48-50 F '60.
(MIRA 13:6)

1. Institut pitaniya AMN SSSR (for Korobkina).
(DIET IN DISEASE)

KAPUSTIN, K.; GRIGOR'YEV, P.; KOROBKINA, G.; nauchnyy sotrudnik, kand.tekhn. nauk

From the culinary expert's notebook. Obshchestv.pit. no.4:30-32 Ap '60. (MIRA 13:6)

1. Institut pitaniya AMN SSSR (for Korobkina).
(Cookery)

KOROBKINA, G.S.; NEMENOVA, Yu.M.; PARAMONOVA, E.G.

Effect of various anti-atherosclerotic diets on the elimination of cholesterol in patients with coronary atherosclerosis. Vop. pit. 19 no.2:23-30 Mr-Ap '60. (MIRA 14:7)

1. Iz laboratorii obmena veshchestv i energii (zav. - prof. O.P. Molchanova), tekhnologicheskoy laboratorii otdela pishchevoy tekhnologii (zav. - prof. D.I.Lobanov) i serdechno-sosudistogo otdeleniya kliniki (zav. - doktor meditsinskikh V.P.Sokolovskiy) Instituta pitaniya AMN SSSR, Moskva.

(CHOLESTEROL) (CORONARY HEART DISEASE)
(DIET IN DISEASE)

BEYUL, Ye.A.; KOROBKINA, G.S.

Canned food for children in the diet of patients with gastrointestinal diseases. Vop. pit. 19 no.2:86-87 Mr-Ap '60. (MIRA 14:7)

1. Iz otdeleniya zheludochno-kishechnykh zabolevaniy (zav. - prof. O.L.Gordon [deceased]) Kliniki lechebnogo pitaniya i tekhnologicheskoy laboratorii (zav. - prof. D.I.Lobanov) Instituta pitaniya AMN SSSR, Moskva.

(ALIMENTARY CANAL--DISEASES)
(FOOD, CANNED)

POLTEVA, Yu.K., kand.med.nauk, zaslushennyy vrach RSFSR; KOROBKINA, G.S., kand.tekhn.nauk

New food products for infants. Med.sestra 19 no.3:26-28 Mr '60. (MIRA 13:5)

1. Iz Instituta pitaniya Akademii meditsinskikh nauk SSSR, Moskva.
(INFANTS--NUTRITION)

KOROBKINA, Galina Sergeyevna; LYADOVA, V., red.; MEDRISH, D., tekhn. red.

[Canned food and food concentrates for infants and the sick] Konservy kontsentraty v detskom i dieticheskom pitanii. Moskva, Gos.izd-vo torg.lit-ry, 1961. 79 p. (MIRA 15:1)
(FOOD, CANNED) (INFANTS—NUTRITION)
(DIET IN DISEASE)

KOROBKINA, G.S.

"Physicochemical and chemical principles of curing" by V.I. Kurko. Reviewed by G.S. Korobkina. Vop. pit. 20 no.6:80 N-D '61. (MIRA 15:6)

(MEAT, SMOKED) (KURKO, V.I.)

KOROBKINA, G.S.; NEMENOVA, Yu.M.; PARAMONOVA, E.G.; GVOZDOVA, L.G.
GLUSHNEVA, Z. Ya.

Effect of diets of different qualitative composition on the clinical course of disease and lipid metabolism in patients with coronary atherosclerosis. Vop.pit. 22 no.1:17-22 Ja-F'63
(MIRA 16:11)

1. Iz Instituta pitaniya AMN SSSR, Moskva.

POKROVSKIY, A.A.; KOROBKINA, G.S.; NEMENOVA, Yu.M.; GIUSHNEVA, Z.Ya.; LUKASIK, I.S.; ALEKAYEV, N.S.

Belip, a protein product from the Institute of Nutrition of the Academy of Medical Sciences of the USSR. Vop. pit. 23 no.2:21-30 Mr-Ap '64. (MIRA 17:10)

1. Institut pitaniya AMN SSSR, Moskva.

KOROBKINA, G.S.; NEMENOVA, Yu.M.; PARAMONOVA, E.G.; GVOZDOVA, L.G.; KALININA, N.N.; GLUSHNEVA, Z.Ya.; TUMARKINA, T.I.; MIRER, M.L.

Effect of a phosphatide-enriched diet on cholesterol metabolism in patients with a history of myocardial infarct. Vop. pit. 23 no.2: 49-53 Mr-Ap '64. (MIRA 17:10)

1. Iz serdechno-sosudistogo otdeleniya kliniki lechebnogo pitaniya (zav. - doktor med. nauk V.P. Sokolovskiy), otdela tekhnologii (zav. - prof. D.I. Lobanov) i otdela fiziologii (zav. - chlen-korrespondent AMN SSSR prof. O.P. Molchanova) Instituta pitaniya AMN SSSR, Moskva.

KOROBKINA, G.S.

Scientific substantiation of methods of processing food products for patients with gastrointestinal diseases and for infants. Vest. AMN SSSR 19 no.5:44-49 '64. (MIRA 18:3)

1. Institut pitaniya AMN SSSR, Moskva.

GULYAYEV, Valentin Nikolayevich; KOROBKINA, G.S., kand. tekhn. nauk, retsenzent; BACHURSKAYA, L.D., inzh., retsenzent; TIKHONOVA, T.V., red.

[Food concentrates and their use under home conditions] Pishchevye kontsentraty i ikh ispol'zovanie v domashnikh usloviiakh. Moskva, Pishchevaia promyshlennost', 1965. 109 p. (MIRA 18:8)

DOROKHOV, Aleksandr Petrovich; KOROBKINA, Galina Stepanovna; STARODUBTSEV, Viktor Aleksandrovich; TSARENKO, Vladimir Timofeyevich; VOLKOV, A.A., retsenzent; OGORODNEYCHUK, I.F., retsenzent; RUDENKO, V.S., retsenzent; TETEL'BAUM, Ya.I., retsenzent; FILONENKO, S.N., dots., otv. red.; NESTERENKO, A.S., red.

[Principles of industrial electronics] Osnovy promyshlennoi elektroniki. [By] A.P.Dorokhov i dr. Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 214 p. (MIRA 17:8)

AUTHOR: Korobkina, I.P. 89-7-29/32

TITLE: In the Atomic Pavilion of the All-Union Industrial Fair (V atomnom pavil'one Vsesoyuznoy promyshlennoy vystavki). ("Radiation Medicine" Section) (Otdel "Radiatsionnaya meditsina")

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 7, pp. 76-78 (USSR)

ABSTRACT: Methods of therapeutical treatment of various diseases (cancer, haemangioma, dermal tuberculosis, eczema, Basedow's diseases) by means of radioactive isotopes were shown on the section for "Radiation Medicine" last year. Photographs of patients before and after being cured by means of radioactive isotopes Co^{60}, P^{32} and J^{131} were shown in the stands. Moreover, the γ-therapeutical apparatus ГУТ-400-1 and ГУТ-20-1 were shown; they are planned for the curing of malignant ulcers and other diseases. Both apparatus work with Co^{60} which supplies an effective homogeneous γ-bundle. Also a dosimetric control system was shown in operation; it comprises the following apparatus: X-ray-meter РИ-1 with automatic switch kilo-X-ray meter КРИ-1 for the measurement of the total dosage (for the order 1000 r) of soft X-rays and of γ-radiation for curative treatment, condenser-dosimeter for the measurement of the dosage output of X-rays and γ-radiation, radiometer B-2 for the measuring of

Card 1/2

radioactivity by means of gaseous meters, X-ray dosimeters ДИБ for measuring dosages of X-ray radiation and -radiation within the range of from 0 to 1000 r. Much attention was also paid to the apparatus for the diagnosis and therapy of diseases; they were clinical radiometers for the determination of the velocity of blood circulation by means of marked atoms, and a two-channel radiograph for the measurement of the intensity of the radiation of a radioactive substance. Much interest was also paid to the radiomanipulation table РМБ-1. In 1957 the department for "Radiation Medicine" will be further completed with other photographs of cancer patients and other patients before and after cure. Several apparatus will be completed or replaced by new ones. The prototypes of the treatment chamber for telegamma therapy will be renewed. There are 4 figures.

AVAILABLE: Library of Congress

Card 2/2

1. Isotopes (Radioactive) - Therapeutic effects - Test Results 2. Medical research - USSR

KOROBKINA, N.M.

137-58-5-8760

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 5 (USSR)

AUTHOR: Korobkina, N. M.

TITLE: Filterability of Mixtures of Ferrous Cakes and Flotation Concentrate (Fil'truyemost' smesey zhelezistykh kekov i flotatsionnogo kontsentrata)

PERIODICAL: Byul. Tsentr. in-t inform. M-va tsvetn. metallurgii SSSR, 1957, Nr 6, pp 12-14

ABSTRACT: Starting in November of 1954, a practice was adopted at the Noril'sk-Kombinat whereby Ni concentrates of the plant were augmented with ferrous cakes (FC) containing considerable amounts of Ni, for the purpose of their further combined processing. After dilution with water, the FC's are added to a thickened flotation concentrate and the mixture is then filtered in a drum-type vacuum filter. Experiments were performed in order to establish optimal conditions for the filtration of the FC-concentrate mixtures. Best results were achieved under the following conditions: density of the initial feed: 65 percent solid; pulp temperature: 55-65°C; addition of lime: 4-6 kg/t (32.4 percent of active CaO). It is advisable to employ smaller angular

Card 1/2

Filterability of Mixtures of Ferrous Cakes and Flotation Concentrate

velocities for the drums of the vacuum filters and to replace the filtering material at least once a month. It has been noted that the filters can operate without being blown out.

A. Sh.

1. Ores--Processing 2. Ores--Properties

KOROBKINA, Z. V. (Samarkand).

Storing grapes in refrigerators. Sov.torg. no.8:49 Ag '57.
(MLRA 10:8)

(Grapes--Storage)

KOROBKINA, Z. V., Candidate Tech Sci (diss) -- "The transportability and keeping qualities of table varieties of Uzbekistan grapes". Moscow, 1959. 22 pp (Moscow Order of Labor Red Banner Inst of National Economy im G. V. Plekhanov), 100 copies (KL, No 25, 1959, 134)

AKIMOVA, N.; KOROBKO, A.; TSAR'KOV, A.

Changes in the vocational composition of workers on the "Bolshevik" State Farm, Moscow Province. Biul. nauch. inform.: trud i zar. plata 4 no.3:46-50 '61. (MIRA 14:3)
(Moscow Province—Farm mechanization)
(Moscow Province—Agricultural laborers)

KOROBKO, A.

Important tasks of scientific institutes. Prof.-tekh.obr. 19 no.1:5-6 Ja '62. (MIRA 15:1)
(Research, Industrial)
(Vocational education)

KOROBKO, A.

Let's put the training of worker cadres on a scientific basis.
Prof.-tekh. obr. 21 no.8:4-5 Ag '64. (MIRA 17:9)

KOROBKO, Aleksandr Il'ich; ZHDANOVICH, Aleksandr Stepanovich; KASHTANOV, F., red.; KALECHITS, G., tekhn. red.

[Reduce production costs; from the work practice of machinery manufacturing and machine-tool enterprises of the White Russian Economic Council] Snizhat' sebestoimost' produktsii; iz opyta raboty predpriiatii mashinostroeniia i metalloobrabotki SNKh BSSR. Minsk, Gos. izd-vo BSSR, Red. proizvodstvennoi lit-ry, 1962. 31 p. (MIRA 15:5)
(White Russia—Machinery industry—Costs)
(White Russia—Machine-tool industry—Costs)

KOROBKO, Boris Grigor'yevich

[Dark adaptation of the eye] O sritel'noi temnovoi adaptatsii. Leningrad, Medgiz, 1958. 247 p. (MIRA 12:4)
(EYE--ACCOMMODATION AND REFRACTION)

EXCERPTA MEDICA Sec 12 Vol 13/12 Ophthalmology Dec 59

1860. DARK ADAPTATION IN RETROBULBAR AXIAL NEURITIS (Russian text) - Korobko B. G. - VESTN. OFTALM. 1958, /6 (16-22)

Many ophthalmologists hold that there is a low level of dark adaptation in retrobulbar axial neuritis. The author disproves this statement by the results of his investigations. It was revealed that in presence of a comparatively small scotoma (up to 10°) the level of the adaptation curve either reaches the upper limit of the 'normal zone', according to Belostotsky-Gofman, or is higher than the limit. However, if scotoma is of a large size (up to 20°) the curve is located in the 'normal zone'. Even in postneuritic atrophy subsequent to the retrobulbar axial neuritis the level of the curve is always higher than in the atrophy following the non-axial neuritis. This phenomenon may be explained evidently by the emancipation of the rods and the cortical representation from the depressing effect of the cones and their representation in the centres. The existence of reciprocal (Orbeli) dependence between the apparatus of the night and day light vision was established experimentally and in clinical conditions (in complete colour blindness, in concomitant strabismus on the deviating eye, in central chorioditis of non-myopic aetiology). In the disturbances just mentioned the apparatus of day vision is deranged. In experimental conditions and in these disturbances the curve of the dark adaptation is on a high level. It may thus be assumed that the same factor acts with respect to the dark adaptation in the retrobulbar axial neuritis, i.e. the absence of the inhibitory effect from the cones of the central fossa. The latter appear to be inactive in this disease either directly or due to the inflammatory process in the axons of the multipolar ganglionic cells which are in synaptic connection with these cones.

(XII, 19°)

KOROEKO, B.G., kand.med.nauk (Leningrad)

Correction of vision in astigmatism in adults. Vest.oft. no.3: 41-43 '61. (MIRA 14:9)

(ASTIGMATISM)

GRINZAYD, Ye.L.; KOROBKO, V.D.

Spectrum analysis of high and complex alloy steels. Report No.1: Method of analysis. Trudy LPI no.201:84-90 '59.
(MIRA 13:3)

(Steel alloys--Spectra)

GRINZAYD, Ye.L.; KOROBKO, F.D.

Spectrum analysis of high and complex alloy steels. Report No.2: Effect of the diluting action of third elements. Trudy LPI no.201:91-101 '59. (MIRA 13:3)
(Steel alloys--Spectra)

KOROBKO, F. D.
Shestakov, V. A.

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SOV/6181

PHASE I BOOK EXPLOITATION

Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy (Materials of the Third Ural Conference on Spectroscopy) Sverdlovsk, Metallurgizdat, 1962. 197 p. Errata slip inserted. 3000 copies printed.

Sponsoring Agencies: Institut fiziki metallov Akademii nauk SSSR. Komissiya po spektroskopii; and Ural'skiy dom tekhniki VSNTO.

Eds. (Title page): G. P. Skornyakov, A. B. Shayevich, and S. G. Bogomolov; Ed.: Gennadiy Pavlovich Skornyakov; Ed. of Publishing House: M. L. Kryzhova; Tech. Ed.: N. T. Mal'kova.

PURPOSE: The book, a collection of articles, is intended for staff members of spectral analysis laboratories in industry and scientific research organizations, as well as for students of related disciplines and for technologists utilizing analytical results.

COVERAGE: The collection presents theoretical and practical problems of the application of atomic and molecular spectral analysis in controlling the chemical composition of various materials in ferrous and nonferrous metallurgy, geology, chemical industry, and medicine. The authors express their thanks to G. V. Chentsova for help in preparing the materials for the press. References follow the individual articles.

GRINZAYD, Ye.L.; BUTOMO, D.G.; KOROLEV, Yu.P.; KOROBKO, F.D.; BUROVA, Ye.S.

Determination of high contents of elements in alloys during the photoelectric recording of a spectrum. Zav. lab. 29 no.6: 686-688 '63. (MIRA 16:6)

1. Leningradskiy politekhnicheskiy institut imeni M.I. Kalinina, i zavod "Krasnyy Vyborzhets".
(Alloys—Analysis) (Spectrum analysis)

S/181/63/005/004/025/047
B102/B186

AUTHORS: Deygen, M. F., and Korobko, G. V.

TITLE: Theory of paramagnetic relaxation of F-centers in arbitrary magnetic fields

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1126 - 1131

TEXT: The paramagnetic relaxation time τ is calculated for local electron centers on the basis of the hyperfine mechanism of contact and dipole-dipole interactions between electron spins and lattice; the applied magnetic field is assumed constant and of arbitrary strength. The wave function of the system is formulated in adiabatic approximation, the electron part of the wave function of the F-centers is described in molecular-orbit approximation. The calculations are made also for the case of zero field strength, temperature being assumed to be low enough so that a restriction to single-phonon processes represents a good approximation. The results obtained indicate that τ for weak magnetic fields will be larger by several orders of magnitude than in the case of strong fields; τ will also depend on the orientation of the field with respect to the crystal. Numerical calculations were carried out for KCl, for the case of strong (3 koe) and of weak

fields (H=0). The following results were obtained:

$\tau_{min}^{cont} \sim 2.7/T$ sec; $\tau_{max}^{cont} \sim 4/T$ min;

$\tau_{min}^{dip} \sim 22.5/T$ min; $\tau_{max}^{dip} \sim 33.3/T$ hrs.

Both contact and dipole-dipole mechanisms may not cause considerable line broadening.

ASSOCIATION: Institut poluprovodnikov AN USSR Kiyev (Institute of Semiconductors AS UkrSSR, Kiyev)

SUBMITTED: November 21, 1962