where I is primary current, U_o is initial emf, k is a proportionality constant, and H is outside magnetic field. Experiments showed that the experimental maximum compression velocity agrees with the order of magnitude of computed value for $\bar{D}$. Discussing the equation the authors note that the optimum compression velocity of plasma depends very little on power of impulse IU_o. It is therefore impossible to achieve in the induction pinch compression velocities higher than 10^7 cm/sec. Experiments show the same is true for other methods of pulse compression of plasma. After investigating the mechanism of the process which leads to the situation where the acceleration is achieved in a relatively short lapse of time while the rest of the period the source of energy idles, the authors conclude that one cannot achieve thermonuclear temperatures by a single pulse compression of the pinch. One apparently needs a process during which plasma will be subjected to multiple expansion and then intensive compression.

Some Magneto-Hydrodynamic Effects Observed During the Pulse Compression of Plasma

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SOV/57-30-3-7/15

At the same time one would need very strong magnetic fields to suppress eruptive instabilities of the pinch. There are 4 figures; and 24 references, 13 Soviet, 6 U.K., 5 U.S. The most recent U.K. and U.S. references are: J. L. Craston, et al., Second Geneva Conference on the Peaceful Uses of Atomic Energy, Paper 15, 34, 1958; S. A. Colgate, H. P. Furth, Science, 128, Nr 3320, 337 (1958); O. A. Anderson, W. R. Baker, S. A. Colgate, J. Ise, Jr., R. V. Pyle, Proc. 3-rd Intern. Conf. on Ionization Phenomena in Gases. Venice, 1957; L. C. Burkhardt, et al., J. Appl. Phys., 26, 519 (1957); B. H. Bostick, Phys. Rev., 106, 404 (1957).

SUBMITTED: October 24, 1959

Card 9/9

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S/057/60/030/011/003/009
B006/B054

AUTHORS: Kvartskhava, I. F., Kervalidze, K. N., and Gvaladze, Yu.S.

TITLE: Instability of an Inductive (Theta) Pinch

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 11, pp. 1321-1328

TEXT: The authors studied one of the forms of plasma instability with which an eruption of local plasma formations from the surface of a strongly compressed pinch can be observed. They call this form "eruptive instability". The authors had already reported on this subject at the 4th International Conference on Ionization Phenomena in Gases (Upsala, 1959). The investigations were made by means of a series of slow-motion pictures ($2 \cdot 10^6$ per second) of theta and zeta pinches. The pictures were taken with a rotating mirror through a narrow slit from the terminal surface of a cylindrical chamber in axial direction. As these experiments had been described earlier, the authors only discuss the results of this photographic method. A photographic camera of the type СФР-2М (SFR-2M) was used. The experiments were made with hydrogen, helium, nitrogen, air

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Instability of an Inductive (Theta) Pinch S/057/60/030/011/003/009
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argon, and krypton at different pressures. It was shown, among other things, that the effects observed depended greatly on the shape of the chamber cross section. The photographs taken are partly shown in Figs. 1 and 2, and the corresponding experimental conditions are given in Tables 1 and 2, respectively. In the following, the individual photographs and their conditions are described and discussed. The investigations showed that all plasma motions are very complicated, and that the instabilities of the pinches are of different forms. A relationship was found to exist between the character of plasma motion and the form of instability. In the pressure range from a few mm Hg up to 10^{-2} mm Hg, it was found that the intensity of eruptive instabilities increased with decreasing pressure, and at still higher pressures, such instabilities do no longer occur. $nkT > H^2/8\pi$ is a necessary condition for the occurrence of an eruption (nkT = thermal pressure of plasma). There are 2 figures, 2 tables, and 12 references: 3 Soviet, 1 German, 3, British, 2 US, and 3 Swiss.

SUBMITTED: May 30, 1960

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Таблица 1

(длина камеры 100 см)

Рис. 1	Напряжение на конденсаторах, кв	Емкость конденсаторов, мкф	Длина катушки, см	N_{max}, его	№ полупериода тока	Давление газа, мм рт. ст.	Диаметр камеры, см	Материал камеры
а	30	90	55	12	1	Воздух, 10^{-1}	27	Фарфор
б	30	90	55	12	1		27	
в	30	90	15	35	1	Kr, 10^{-1}	27	
г	30	90	15	35	1	Kr, $8 \cdot 10^{-2}$	27	
д	25	90	55	10	2	Kr, $2 \cdot 10^{-2}$	27	
е	30	90	15	35	2	He, $7 \cdot 10^{-2}$	27	
ж	30	180	55	18	2	He, $5 \cdot 10^{-2}$	27	
з	30	60	55	10	1	He, 10^{-1}	27	
и	30	60	55	10	2		10	Кварц
к	30	90	38	40	1—2	He, $5 \cdot 10^{-2}$	5	
л	30	60	15	70	1—2	He, $8 \cdot 10^{-2}$	27	Фарфор
м	30	90	15	35	1	H_2, $3 \cdot 10^{-1}$	27	
н	28	120	55	13	3—4	He, $3 \cdot 10^{-1}$	27	
о	28	180	55	16	2	He, 10^{-2}	27	

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Таблица 2

(Длина камеры: *а*—*и* — 50 см, *к* — 100 см)

Рис. 2	Напряжение на конденсаторах, кв	Емкость конденсаторов, мкф	Форма катушки	Длина катушки, см	H_{max}, эге	№ полупериода тока	Давление газа, мм рт. ст.	Площадь светящейся камеры, см²	Материал камеры
а	30	60	Круглая	15	25	1	Воздух 10^{-1}	490	Стекло
б	30	60		15	25	2		490	
в	30	90	Квадратная	20	30	1		490	
г	30	90	Прямоугольная	40	35	1		240	
д	30	90		40	35	2	He, $5 \cdot 10^{-2}$	240	
е	30	60		15	20	2	Ar, 10^{-1}	220	
ж	30	60		12	45	1	He, $4 \cdot 10^{-1}$	200	
з	30	60	Круглая	12	45	1	He, 10^{-1}	200	Кварц
и	30	60		12	45	3—4	He, $5 \cdot 10^{-2}$	200	
к	30	90		15	35	1	N_2, $2 \cdot 10^{-1}$	600	Фарфор

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Legends of the tables:

Table 1
(Chamber length 100 cm)

Fig. 1	Capacitor voltage [kv]	Capacitance [µf]	Coil length [cm]	H_{max} [kilo-gauss]	No. of the half-cycle of the current	Gas pressure [mm Hg] air	Chamber diameter [cm]	Material of the chamber
								porcelain
								quartz
								porcelain

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Table 2
(Chamber length a-u-50 cm, k - 100 cm)

Fig. 2	Capacitor voltage [kv]	Capacitance [μf]	Shape of the coil	Coil length [cm]	H_{max} [kilogauss]	No. of the half-cycle of the current	Gas pressure [mm Hg]	Area of the chamber cross section [cm²]	Material of the chamber
			round				air		glass
			square						quartz
			rect-angular						porcelain
			round						

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B006/B063

24.2321

AUTHORS: Kvartskhava, I. F., Kervalidze, K. N., Gvaladze, Yu. S.

TITLE: Instability of an Induction Pinch

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 5, pp. 1641 - 1643

TEXT: The present "Letter to the Editor" gives a fundamental representation of plasma motion in inductive (theta) pinches, and describes the experimental conditions under which the accompanying photographs were taken. At the Fourth International Conference on Ionization Processes in Gases, held at Upsala in 1959, the authors gave a report on the new kinds of instability of linear and inductive pinches, which had been observed during a compression shock in a plasma. These phenomena had been detected photographically. In the present paper, the authors report on further investigations carried out with a quick-acting camera of the type СФР-2М (SFR-2M). The effects of the instability of ϑ-pinches were recorded on a time magnifier basis. These effects are related to an azimuthal inhomogeneity of the velocities of the radial motion of the

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plasma during the compression shock. The various experimental conditions are given in a table. Glass or porcelain vessels served as discharge chambers, and air, nitrogen, and helium (pressures of 0.1 torr; one experimental series was performed with He at 0.07 torr) were used as discharge gases. The accompanying Fig. reproduces some of the photographs, the major part of which were taken in cylindrical discharge chambers. Those in the last two rows were taken in chambers with square cross sections. The exposure was 0.5 μsec, and there was an interval of 2 μsec between the various exposures. The photographs are described in detail along with the forms of the individual columns and the effect of the compression shock on them. All these effects vanish at higher gas pressure. Also in the case of smaller chamber diameters, they are largely reduced or absent. These phenomena are primarily due to the magneto-hydrodynamic character of plasma motion in the magnetic field. For example, the azimuthal rotation of the expansion figures of the pinch in comparison to the compression figures is indicative of the significant role played for these processes by the reflection of shock waves at the magnetic fields captured by the plasma. The changes of the spatial figures are such as to remind one of the phenomena of an elastic

Instability of an Induction Pinch

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body whose "coefficient of elasticity" is largely dependent on the direction of the magnetic field. A qualitative analysis of the data obtained shows that the plasma is not in equilibrium when it is in the maximum compressed state. Comparatively weakly damped intense macroscopic motions are induced in it, which lead to eruptive instabilities. The latter render it difficult to obtain a high-temperature plasma in pulsed processes. Details of these investigations will be published at a later date. There are 1 figure, 1 table, and 1 Soviet reference.

SUBMITTED: January 23, 1960

Card 3/3

21537

24,2120 (1049,1482,1502,1532)
26.2321

S/057/61/031/004/003/018
B125/B205

AUTHORS: Plyutto, A. A. and Kervalidze, K. N.

TITLE: Calculation of the radial motion of plasma in the case of an induction pinch

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 4, 1961, 400-406

TEXT: The present paper deals with the calculation of the motion of plasma on the assumption that the current-carrying layer has an infinite conductivity and the plasma is completely raked. Particular attention has been paid to the physical aspects of the problem. The equation of motion is considered on the following simplifying assumptions: The breakdown through the gas occurs instantaneously. The magnetic field between plasma envelope and solenoid is given by $B_c = 4\pi i/c = B$. The plasma motion is schematically shown in Fig. 1. The equation of motion for the plasma front reads:

$\frac{d}{dt}\left(M\frac{dr}{dt}\right) = -\left(\frac{B^2}{8\pi} - P\right)2\pi r$ (1), where B is the magnetic field strength, M the mass per unit length of the plasma front, and P the initial pressure of

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the gas. Since $M = \pi\varrho(R^2 - r^2)$ and $B = 4\pi I/c$, it follows from Eq. (1) that $\frac{d}{dt}\left[(R^2 - r^2)\frac{dr}{dt}\right] = -\frac{2r}{\varrho}\left(\frac{2\pi I^2}{c^2} - P\right)$ (2). This equation can be solved if the rule underlying the variation of I is known. If the solenoid is fed by a condenser bank, then the current strength is given by $\frac{1}{c^2}\frac{d}{dt}(LI) + RI + \frac{1}{C_o}\int_0^t Idt = \frac{V_o}{l}$ (3), where I is the current strength per unit length of the solenoid, l the length of the solenoid, V_o the initial voltage of the condensers, L the inductance, R the ohmic resistance, and C_o the capacitance in the solenoid circuit. The inductance L of the external circuit grows as the plasma approaches the axis, and may be written as $L = L_o + L_r = L_o + (4\pi^2/l)(R^2 - r^2)$ (4), where L_o is the constant component, L_r the component growing from 0 to $(4\pi^2/l)(R^2 - r_o^2)$ as the plasma approaches the axis; (2), (3), and (4) can be used to determine the velocity of the plasma for any instant from the beginning of the process up to the first

Calculation of ...

pinch of the plasma column. The equation for a linear pinch derived by M.. A. Leontovich and S. M. Osovets (Atomnaya energiya, No. 3, 81, 1956) is mentioned. The second part of the present paper deals with the solution of the equation of motion. For the period of convergence of the plasma one obtains $t \ll T/4$, where T is the oscillation period of the circuit with maximum inductance, and the ohmic resistance in the circuit is low. The time dependence of the current strength is then given by $I = (c^2 V_0/IL)t$. In addition, $B^2/8\pi = 2\pi I^2/c^2 \gg P$ holds. For the equation of motion one obtains

$$\frac{d}{dt}\left[(R^2 - r^2)\frac{dr}{dt}\right] = -\frac{4\pi c^2 V_0^2 t^2 r}{\rho l^2 L_0^2\left[1 + \frac{4\pi^2 R^2}{lL_0}\left(1 - \frac{r^2}{R^2}\right)\right]^2}. \qquad (7) \qquad (7),$$

and after introducing the dimensionless quantities

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Calculation of ...

$$X=\frac{r}{R}, \qquad (8)$$ (8),

$$\tau=\left(\frac{4\pi c^2 V_0^2}{\rho L_0^2 l^2 R^2}\right)^{1/4} t, \qquad (9)$$ (9),

$$A=\frac{4\pi^2 R^2}{l L_0}. \qquad (10)$$ (10)

the equation of motion in dimensionless variables reads

$\frac{d}{d\tau}\left[(1 - X^2)\frac{dX}{d\tau}\right] = -\frac{\tau^2 X}{\left|1 + A(1 - X^2)\right|^2}$ (11). This relation can be solved by numerical integration. For $A \leqslant 0.5$ its solution is

$$X=1-0.29\tau^2+(6.7\cdot 10^{-2}A-2.5\cdot 10^{-2})\tau^4- \qquad (12).$$
$$-(7\cdot 10^{-3}A^2+2.4\cdot 10^{-3}A-3\cdot 10^{-4})\tau^6. \qquad (12).$$

With the notation $k = (4\pi c^2 V_0^2/\rho L_0^2 l^2 R)^{1/4}$ one obtains

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Calculation of ...

$$v = k^2 R t\,[0.58 - (2.7 \cdot 10^{-1} A - 10^{-2})\,k^2 t^2 + \\ + (4.2 \cdot 10^{-2} A^2 + 1.45 \cdot 10^{-2} A - 1.8 \cdot 10^{-3})\,k^4 t^4]. \quad (13)$$ (13).

The maximum velocity on the axis is reached at $t = t_{max} = \tau_{max}/k$, and is equal to

$$v_{max} = kR\tau_{max}\,[0.58 - (2.7 \cdot 10^{-1} - 10^{-2})\,\tau_{max}^2 + \\ + (4.2 \cdot 10^{-2} A^2 + 1.45 \cdot 10^{-2} A - 1.8 \cdot 10^{-3})\,\tau_{max}^4; \quad (14)$$ (14).

From this it follows in practical units that

$$v_{max} = kRf_1(A) = 2.94 \cdot 10^3 \left(\frac{V_0}{R}\right)^{1/3} \rho^{-1/6} A^{1/6} f_1(A) = \\ = 3.92 \cdot 10^3 V_0^{1/3} M_0^{-1/6} A^{1/6} f_1(A); \quad (15)$$ (15),

where $M_0 = \pi\rho R^2$ is the mass per unit length of the plasma column. For $A \leqslant 0.1$ (11) has the solution

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Calculation of ...

$$X=1-0.29\tau^2; \quad (16)$$

(16),

$$v=0.58k^2Rt=\frac{2V_{0c}}{L_0\sqrt{\rho}}t; \quad (17)$$

(17),

$$v_{max}=0.58kR\tau_{max}=2\left(\frac{V_0Rc}{L_0}\right)^{1/3}\rho^{-1/4} \quad (18)$$

(18)

with $\tau_{max} = 1.87$, and in practical units

$$v_{max}=6.35\cdot10^{-1}\left(\frac{V_0R}{L_0l}\right)^{1/3}\rho^{-1/4}=4.26\cdot10^3V_0^{1/4}M_0^{-1/4}A^{1/4}. \quad (19)$$

(19).

(16)-(19) are valid at practically constant inductance of the circuit. If inductance varies by a factor of up to one-half with respect to the initial value, then (12)-(15) will be valid. At $A > 0.5$ it was not possible to obtain a convenient approximate solution, and (11) was numerically integrated within this range

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Calculation of ...

$$v_{max} = 5.8 \cdot 10^{-1} \left(\frac{V_0 R}{L_0 I}\right)^{1/8} \rho^{-1/4} f(A) =$$
$$= 3.9 \cdot 10^3 V_0^{1/4} M_0^{-1/4} A^{1/4} f(A). \quad (20)$$

holds for the maximum velocities of convergence. Discussion of results: The general character of radial plasma motion is determined by the moving force that increases with increasing pinch and competes with the mass of the plasma. Accelerations are highest in the neighborhood of the walls (at $r \sim R$). Velocities of motion close to the maximum value are attained already at $X \sim 0.75$ to 0.95. The maximum velocities v_{max} are attained on the axis of the system v_{max} amounts to $V_0^{1/2} \rho^{-1/4}$, irrespective of the geometrical conditions of the system. This dependence holds for all systems of plasma acceleration at which $I \sim t$ and $H^2/8\pi \gg P$. In the case of radial plasma induction by an induction pinch, a plasma having an initial temperature of 10^7-10^8 °K can be obtained in small spatial regions. For the purpose of maintaining high values of v_{max} with a large plasma volume, it is advisable in practice to extend the length l of the system and to have a

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small radius.R. Under real conditions, part of the magnetic field penetrates into the plasma. Another difference between practice and theory is that of a shock runs in front of the plasma front. It is therefore possible that the rate of radial contraction of the plasma decreases by a factor of $\sqrt{2}$ with respect to the theoretical value. Experimental and computed data for different experimental conditions are intercompared in a table. The computed values of v_{max} are 1.5-2 times higher than the experimental ones. This difference becomes insignificant when the temperature rise in the shock wave is taken into account. I. F. Kvartskhava is thanked for her interest in the work, and M. Z. Maksimov for discussions. There are 4 figures, 1 table, and 3 Soviet-bloc references.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN Gruz. SSR Sukhumi (Institute of Physics and Technology, AS Gruzinskaya SSR, Sukhumi)

SUBMITTED: May 16, 1960

15-57-5-6912

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, p 168 (USSR)

AUTHOR: Kervalishvili, D. N.

TITLE: The Action of Percussion Apparatus on Compacting Soils (K voprosu o vzaimodeystvii udarnogo rabochego organa s uplotnyayemym gruntom)

PERIODICAL: Tr. Gruz. n.-i. in-ta gidrotekhn. i melior., 1956, Nr 4 (17), pp 234-243

ABSTRACT: The author proposes a new principle for evaluating the effectiveness of the percussive compaction of soils on the bottom and sides of irrigation canals. He suggests that, to appraise this measure, it is insufficient to know only the quantity of work expended on the compaction and the value of the striking force. These are but mechanical characteristics of the percussion. In the opinion of the author, the effect of compaction

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The Action of Percussion Apparatus (Cont.)

must be evaluated by the stress that develops on the surface of the ground at the instant of the blow, reflecting the deformation occurring within the ground. On the assumption that there is a straight-line relationship between the stress and deformation of the soil, a formula is derived analytically for calculating the maximum stress on the surface of the ground. The formula shows that the duration of the blow depends on the weight of the ramming apparatus, its size, and the modulus of deformation of the soil, but does not depend on the height of fall of the ramming apparatus. Knowing the required volumetric change in the soil, its initial state, and the basic operating parameters of the ramming apparatus, one may calculate the necessary number of blows at one site. To test experimentally the analytically derived formula, laboratory and field studies were made on heavy and intermediate loess-like sandy clay loams in two irrigating systems in Georgia. The stress in the soil was measured by using the hydroaerostatic dynamometers of Professor G. I. Pokrovskiy. These were placed in the ground at

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The Action of Percussion Apparatus (Cont.) 15-57-6-6912

different depths. A comparison of the experimentally measured stresses with stress values calculated mathematically by the author showed close agreement.

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Ye. G. B.

KERVALISHVILI, D.M., kand.tekhn.nauk(Tbilisi)

The new DDA-58 and DDA-59 long-range sprinklers. Gidr.i mel. 12 no.7:23-25 Jl '60. (MIRA 13:7)
(Sprinklers)

KERVALISHVILI, D.M.

THE DDA-59 sprinkling unit D.M.Kervalishvili. Biul.tekh.-ekon. inform. no.10:48-50 '60. (MIRA 13:10)
(Sprinklers)

KERVALISHVILI, D.M.

Results of testing the DDA-52 pipe-type sprinkler. Trudy GruzNIIGiM no.20:118-120 '58. (MIRA 15:5)
(Georgia--Sprinkler irrigation)

KERVALISHVILI, D.M.

Departmental testing of the DDA-58 long-stream sprinkler. Trudy Gruz NIIGiM no.21:149-152 '60. (MIRA 16:1)
(Georgia--Sprinklers--Testing)

L 13447-66 EWT(l)/EWT(m)/ETC(f)/EWG(m)/T/EWA(m)-2 IJP(c) DS

ACC NR: AP6002443 SOURCE CODE: UR/0057/65/035/012/2194/2201

AUTHOR: Kervalishvili, N.A.; Zharinov, A.V.

ORG: none

TITLE: Characteristics of a low pressure discharge in a transverse magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 12, 1965, 2194-2201

TOPIC TAGS: gas discharge, argon, low pressure, transverse magnetic field, ion current, electric current, electrode

ABSTRACT: The authors have investigated 1 to 10 kV discharges in argon at pressures down to 5 x 10^{-5} mm Hg in transverse magnetic fields up to 1.3 kOe in order to elucidate the phenomena taking place in the region of negative space charge that is known to form near the anode. The anode was a 7 cm long, 1.8 cm diameter water cooled metallic cylinder. Three cathodes were simultaneously employed: a 10 cm diameter cylinder coaxial with the anode, and two 8 cm diameter circular disks mounted normal to the axis of the cylindrical electrodes, and 7.4 cm apart. One of the disk cathodes was of nickel wire mesh, and behind it was a 1 mm^2 probe with which the radial distribution of the axial electron and ion currents could be measured. The electron and ion currents to the central portion of the cylindrical cathode were also measured with the aid of a screened opening in the electrode and a probe. The magnetic field was parallel to the axis of the cylindrical electrodes. At pressures below 10^{-3} mm Hg

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ACC NR: AP6002443

there was clearly visible a luminous region around the ; anode; at higher pressures the discharge current increased sharply and the luminosity filled the entire chamber. The ion current measured by the probe behind the disk cathode was negligible compared with the electron current. The radial distribution of the electron current to this probe was independent of pressure and was maximum at a radius corresponding roughly to that of the luminous region. The discharge current increased approximately linearly with increasing discharge potential and increased but with approach to saturation with increasing magnetic field strength. The form of the energy spectrum of the ions reaching the center of the cylindrical cathode was independent of pressure and nearly independent of magnetic field strength. The average energy of the ions corresponded to about one-third the applied discharge potential. A simple theory of the discharge is developed on the assumptions that electrons move parallel to an infinite plane anode and ionize the atoms of a stationary gas. This theory accounts qualitatively for most of the observed phenomena except the tendency of the discharge current to saturate with increasing magnetic field strength. It is hypothesized that this saturation is due to irregularities of the anode surface. This hypothesis was verified by further calculations and experiments in which the anode was first carefully adjusted until it was parallel to the magnetic lines of force and then provided with an artificial protuberance consisting of a 0.5 cm long ring of thickness from 0.03 to 0.6 cm. The authors thank V.N.Danilov for proposing the theoretical model of the discharge. Orig. art. has: 18 formulas, 7 figures, and 1 table.

SUB CODE: 20 SUBM DATE: 18Jan65 ORIG. REF: 003 OTH REF: 005

Card 2/2 FW

KERVALISHVILI, O.G.

Load regulator for the automatic control circuit for a mine hoist with an asynchronous drive. Soob.AN Gruz.SSR 23 no.4:451-455 O '59. (MIRA 13:5)

1. Akademiya Nauk Gruzinskoy SSR, Institut gornogo dela, Tbilisi. Predstavleno chlenom-korrespondentom Akademii F.N.Tavadze.
(Mine hoisting) (Automatic control)

KERVALISHVILI, O. G.

Cand Tech Sci - (diss) "Control of the course of small mine lifts using centrifugal braking." Tbilisi, 1961. 22 pp with diagrams; (State Committee of Higher and Secondary Specialist Education under the Council of Ministers Georgian SSR, Georgian Order of Labor Red Banner Polytechnic Inst imeni V. I. Lenin); 200 copies; free; (KL, 6-61sup, 218)

KERVANBASHIEV, St.

Auxiliary products for metal casting, made by FOSECO, Ltd., Great Britain. Mashinostroene 12 no. 11: 45-57 N '63.

KERVANBASHIEV, St., inzh.

Elimination of waste in the chill casting of complex brass bodies with hydraulic compactness. Mashinostroene 12 no.7:18-23 Jl '63.

IVANOV, P., inzh.; KERVANBASHIEV, St., inzh.; ARSOV, IA., inzh.; RAIKOV, K.,inzh.

A new foundry binder based on bitumen. Mashinostroene 13 no.4: 23-27 Ap '64.

KORYAMBASHIEV, Stefan, inzh.

Charcoal or combined fluxes. Tekhnika Bulg 13 no.4:30-31 '64

IVANOV, P., inzh.; ARSOV, IA., inzh.; KERVANBASHIEV, St., inzh.

A binder for foundry purposes. Tekhnika Bulg 13 no.6:33-34 '64.

KERVANBASHIEV, Stoiu, inzh.

Founding and metallurgic requirements for production of high-quality chill-cast brass castings. Tekhnika Bulg 12 no.7:20-23 '63.

MD

Polarographic determination of the riboflavin and thiamine content of foods. K. Kervel, M. Kitzel and M. Simek (*Acta chim. hung.*, 1955, 6, 345—360).—A description is given of a method for the polarographic determination of riboflavin (I) and thiamine (II) in foods, which is based on the reduction of the vitamins on the dropping Hg cathode. Current–voltage curves are prepared from polarography of solutions of known content (160—180 μg.) of each of the vitamins, buffered by a phosphate buffer of pH 7·6 in the case of I and by an acetate buffer of pH 6·2 in the case of II; this known amount of I or II is then added to the solution to be estimated and the polarograph of the mixed solution is taken. The solutions of necessary purity and concn. for polarography are made by (a) extracting the vitamins from the foods (yeasts, liver, spinach, etc.) with 0·1*N*-HCl solution for I, and with 0·1*N*-HCl and 80% EtOH for II, and (b) enriching the resulting solutions and removing interfering substances by absorbing the vitamins (on fuller's earth activated with KCl for I and with active C for II), washing out the interfering substances from the adsorbents, and eluting the vitamin from the adsorbent (with hot 80% acetone for I, and with HCl–EtOH for II, the elution of I being quant., but of II yielding up to 90% only). The solution obtained is used for determining the amount of free vitamin present. For finding the total free and combined vitamin present in the sample, and hence enabling the amount of bound vitamin to be determined, part of the solution resulting from step (a) is subjected to the action of taka-diastase to free the bound vitamin before the enriching and subsequent steps. Full details are given of the procedures for various foods. In the estimation of I the results are accurate within 4—6%, provided that the content is <400 μg. per kg.

H. L. WHITEHEAD.

(2)

KULIYEV, A.M.; KULIYEV, R.Sh.; DREYZINA, M.M.; KERVORKOVA, I.S.; ALIYEV, M.I.; SULEYMANOVA, F.G.; EL'OVICH, I.I.; NESTERENKO, M.Ye.

Methods for improving the quality of oil for carburetor engines. Sbor.trud.Az NII NP no.4:89-113 '59. (MIRA 15:5)
(Carburetors) (Lubrication and lubricants)

JASINSKAITE, J.; KERVYTE, A.; MATKUTE, I.; MOLDERYTE, B.; NARVYDAITE, O.; PAZUSYTE, A.; PUODYTE, M.; RADZEVICIUTE, D.; REKSNYTE, B.; SEPETYTE, O.; TREBUTYTE, M.; VALAKEVICIUTE, I.; ZINKEVICIUTE, Z.

The incidence and piperazine therapy of ascariasis among students of the Vilnius Republican School of Medicine. Sveik. apsaug. no.12: 41-43 '62.

1. Respublikines Vilniaus medicinos mokyklos mikrobiologijos burelis. Mokyklos direktorius -- R. Markauskas; burelio vadovas -- J. Rubikas).
(PIPERAZINE) (ASCARIASIS)

BOLOGA, Emil. 1. dr.; PASZTOR, Pal, dr.; KERY, Bela, dr.

Klippel-Trenaunay syndrome of the right arm with atrophy of the bone and soft tissue. Borgyogy vener. szemle. 40 no.4:168-171 Ag '64.

1. A Brassoi (Roman Nepkoztarsasag) 1-es szam. Egyesitett Korhaz Borgyogyaszati osztalyanak vezeto Bologa Emil dr foorvos) es Rontgenosztalyanak (vezeto Pasztor Pal dr. foorvos) kozlemenye.

KERY, Gerzson

A theorem of Ramsay pertinent to the theory of graphs. Mat lapok 15 no.1/3:204-224 '64

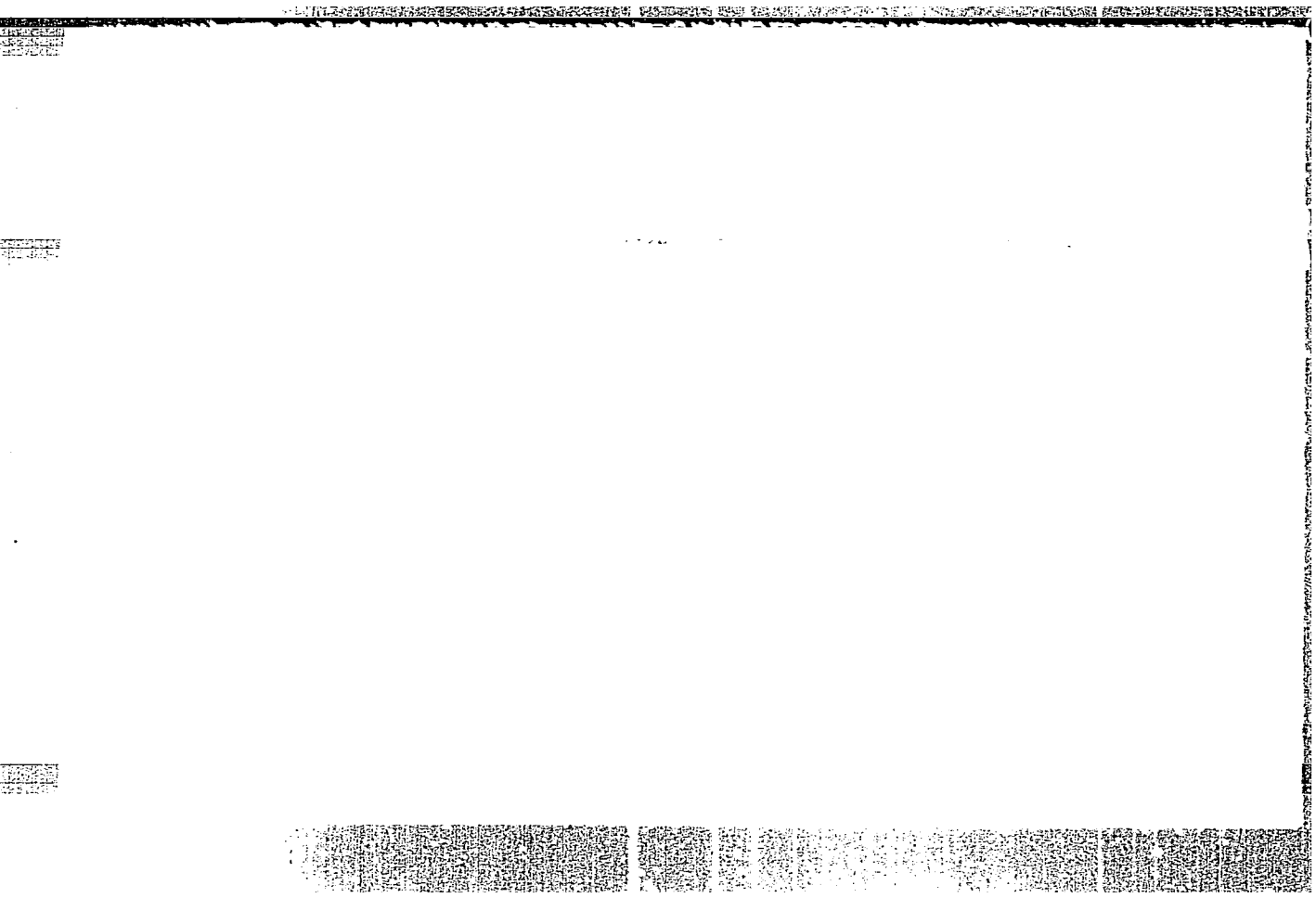
KERY, GY.; CSUTOR, J.

Modernization efforts in the production of simple concrete pipes.
p. 70 Vol. 8, No. 2 Feb. 1956. EPITOANYAG. Budapest, Hungary.

SOURCE: East European List, (EEAL) Library of Congress Vol. 6, No. 1 January 1956.

[redacted]

[redacted]



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721610007-7"

KERYNIN, G.V. (Moskva)

Determination of the expenditure of air in a complex pneumatic system. Avtom. i telem. 25 no.7:1128-1133 Jl '64. (MIRA 17:12)

KERZE, Pavel, inz. (Ljubljana)

Influence of the antivegetal paint on the corrosion of ship's bottom. Brodogradnja 7 no.2:83-84 '56.

KERZHAK, A.

Kerzhak, A. "A river from the Kuznets Alatau", (The Kiya River, notes of a regional student), Stalinskiy Kuzbass, No. 1, 1949, p. 131-35

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

ATAROV, M.S.; BERNSHTEYN, A.S.; BUNIN, N.N.; VOL'NOV, I.I.; GINZBURG, V.A; DANCVSKIY, N.F.; IVLEV, N.I.; KERZHENEVICH, Yu.B.; LITVII-SEDOY, M.Z.; MAYZEL', B.N.; ROTENBERG, G.I.; TYAGUNOVA, Z.I., red.; PLAKSHE, L.Yu., tekhn. red.

[Concise Italian-Russian polytechnic dictionary] Kratkii ital'iansko-russki politekhnicheskii slovar'. Moskva, Glav.red.inostr. nauchno-tekhn.slovarei Fizmatgiza, 1961. 378 p. (MIRA 14:12)
(Italian language—Dictionaries—Russian)
(Technology—Dictionaries)

KERZHENTSEV, N. I.

Forests of the Tyumen oblast. Moskva, Goslesbumizdat, 1954. 51 p.

KERZHENTSEV, N.I.; YURGENSON, Ye.I., kand. sel'skokhoz. nauk

Conservation of forests as an important link in the conservation of Kama Valley natural resources. Okhr. prir. na Urale no.2:67-75 '61. (MIRA 17:7)

KERZHENTSEV, V.V.

CA

2

Thermal conductivity of binary liquid systems. N. B. Vargaftik and V. V. Kerzhentsev (MAI im. S. Ordzhonikidze Kafedra Fiz., Moscow). *Zhur. Fiz. Khim.* 24, 718–20(1950).—The thermal cond. of the system $PhNH_2$–HOAc was detd. by Frontas'ev's method (*C.A.* 40, 4284'). The mol. percentages of HOAc and $K \times 10^{-4}$ are: 0, 41.2; 20, 40.0; 40, 41.1; 60, 41.9; 80, 43.8; and 100, 40.9 cal./cm. sec. degree. Paul W. Howerton

BUKHOVTSEV, B.B. (Moskva); KERZHENTSEV, V.V. (Moskva); MYAKISHEV, G. Ya. (Moskva)

Physics Olympiad of 1961 at the Moscow State University.
Fiz. v shkole 21 no.6:82-85 N-D '61. (MIRA 14:12)
(Physics—Competitions)

BUKHOVTSEV, B.B.; KERZHENTSEV, V.V.; MYAKISHEV, G.Ya.

The 24th Physics Olympiad of 1963 held by the Physics Faculty of the Moscow State University. Fiz. v shkole 23 no.5:86-90 S-O '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BUKHOVTSEV, B.B. (Moskva); KERZHENTSEV, V.V. (Moskva); MYAKISHEV, G.Ya. (Moskva)

The 23d Olympiad of Physics at the Physics Faculty of Moscow University in 1962. Fiz.v shkole 22 no.5:102-104 S-O '62. (MIRA 15:12)

(Physics—Competitions)

L 10597-63 EPF(n)-2/EWA(h)/EWP(q)/BDS/EWT(l)/EWT(m) AFFTC/ASD/SSD
Pu-4 WW/JW/JD
ACCESSION NR: AP3000204 S/0136/63/000/005/0067/0075

AUTHOR: Minayev, A. I.; Kerzhentsev, V. V. 65

TITLE: Average specific heat capacity of thermo-metals and alloys, composing thermo-bimetallic elements

SOURCE: Tsvetnyye metally, no. 5, 1963, 67-75

TOPIC TAGS: thermal capacity thermo-bimetals, alloys, massive calorimeter, additive deviations

ABSTRACT: The average heat capacity of (nine) ferro-nickel alloys with their active and passive thermo-bimetallic components and (eleven) makes of thermo-metallic plates have been studied by a method known as the bulk calorimeter method.

It has been found that the coefficient of heat expansion of alloys that have as their components active bimetallic elements is larger than that of the alloys with passive components. The smallest coefficient of heat expansion was found in the ferro-nickel alloy (invar) with 36% Ni. The temperature curve of the thermo-bimetals was found to take a path between two other temperature curves of the corresponding elements composing the thermo-bimetals. This rule prevailed in all experiments with other makes of thermo-bimetals. Orig. art. has: 3 equations, 4 figures and 4 tables.

Card 1/2

KERZHENTSEVA, G.N.

Work of the Perm Province Section of the Russian Society for Promotion of Conservation of Nature. Okhr. prir. na Urale no.2: 171-172 '61. (MIRA 17:7)

AUTHOR : Kerzhentseva, N.P.

"Propagation of Electromagnetic Waves in Bent Wave Guides of Circular Cross Section,"
A-U Sci Conf dedicated to "Radio Day" Moscow, 20-25 May 1957.

PERIODICAL: Radiotekhnika i Elek ronika, Vol. 2, No. 9, pp. 1221-1224, 1957, (USSR)

KERZHENTSEVA, N.P.

B. Z. Katsenelenbaum, N. P. KERZHENTSEVA, V. V. Malin, A. N. Sivov: "Propagation of H_{01} waves in a periodic waveguide." Scientific Session Devoted to Radio Day, May 1958, Trudrezervizdat, Moscow, 9 Sep 58

Conditions for the propagation of a summetric magnetic H_{01} wave in a rectilinear periodic waveguide and the transmission of an H_{01} wave through a bend in a periodic waveguide are investigated.

The periodicity, shape and size of the conductor from which the waveguide is wound, the finite conductivity of the metal, the dielectric shell of the waveguide are taken into account in computing the damping of the H_{01} wave.

The compling coefficients of the H_{01} wave with the parasitic E and H_1 type waves which arise are found when analyzing the transmission of the H_{01} wave through the bend.

AUTHOR: Kerzhentseva, M.P. 109-3-5-8/17

TITLE: Propagation of Electro-magnetic Waves in Bent Waveguides having Circular Cross-section (O rasprostranenii elektro-magnitnykh voln v izognutykh volnovodakh kruglogo secheniya)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol III, Nr 5, pp 649 - 659 (USSR)

ABSTRACT: The circular, cylindrical waveguide is assumed to be bent in such a way that its axis forms an arc on the circumference of a circle. The straight line passing through the centre of the circle and perpendicular to the plane of the bend is assumed to form the y-axis of a cylindrical co-ordinate system r, θ, y . The line of intersection of the plane θ= const, with the waveguide forms a circumference having a radius, a . The co-ordinates y and r form a rectangular system in this plane. It is assumed, however, that an x, y co-ordinate system which has the origin at the centre of the waveguide cross-section (see Fig.1) is more suitable for the investigation of the problem; in this case, x = R - r , where R is the radius of the bend (measured from the axis of the waveguide). The field in a given cross-section can be regarded as a super-position of the natural (eigen) waves for a rectilinear wave-guide of the same cross-section (Ref.3), whose amplitudes and

Cardl/5

phases are functions of the angle ϑ. The components of the electro-magnetic field in the bend have the following form:

$$E_z = -\alpha_\eta^2 \varphi^\eta (a_\eta^+ e^{-in_\eta \vartheta} + a_\eta^- e^{in_\eta \vartheta}) \qquad (5)$$

$$H_z = -\beta_\eta^2 \psi^\eta (b_\eta^+ e^{-im_\eta \vartheta} + b_\eta^- e^{im_\eta \vartheta})$$

where the amplitudes $a_\eta^\pm$ and $b_\eta^\pm$ are functions of ϑ; η is a double repetitive index indicating that it is necessary to add all the eigen functions of the linear waveguide. The coefficients a and b can be found from a system of an infinite number of linear differential equations of the first order, as expressed by Eqs.(7); this system of equations should be solved for the boundary conditions expressed by Eqs.(8); the coefficients A, A and C in Eqs.(7) are expressed by Eqs.(9) where S, T, M, L and K represent the

integrals taken over the transverse cross-section of the waveguide (Ref.3). For the case of [illegible] and R , the coefficients a and b are in the form of Eqs.(10). The eigen functions for a cylindrical waveguide are in the form of Eqs.(12). The coefficients A, B, C and D for a bent waveguide can be expressed by Eqs.(16), (17), (19) and (20), respectively; Eqs.(16) and (17) have to fulfil the conditions expressed by Eqs.(14) and (15), while Eqs.(19) and (20) are subject to the conditions given by Eq.(18). Eqs.(16)-(17), (19)-(20) and (10)-(11) make it possible to determine the parasitic amplitudes for an arbitrary value of ka , for an arbitrary wave impinging on the bend. In the case of an H_{11} wave, there are two possibilities (see Fig.2). In the first case, the wave is described by:

$$\psi_o = P_o J_1(\beta_o \varrho) \cos \alpha$$

(polarisation Nr 1), whereas the polarisation Nr 2 is defined by the wave function:

Propagation of Electro-magnetic Waves in Bent Waveguides Having Circular Cross-section

$$\psi_o = P_o J_1(\beta_o \rho) \sin \alpha \ .$$

It is shown that the overall losses for polarisation Nr 1 can be expressed by Eq.(25) while those due to the polarisation Nr 2 are given by Eq.(26). Table 1 shows the relative field energies for various waves generated in a discontinuous bend having an angle $\vartheta = 1^0$. From the table, it is seen that the largest portion of the energy lost due to the bend is carried by H_{21} wave (in the case of Nr 1 polarisation) and by E_{01} wave in the case of Nr 2 polarisation. The energy losses for an H_{11} wave in a waveguide having a smooth bend with an angle ϵ_o are shown in Table 2. From these, it follows that the losses for the polarisation Nr 1 are lower by an order of magnitude than those for the Nr 2 polarisation. In the case of small R , the H_{11} wave, having the Nr 2 polarisation, leads to amplitude coefficients in the form expressed by Eqs.(30). The solution of these equations is in the form of Eqs.(31), (32), (33); if the H_{11} wave has the Nr 1 polarisation

Propagation of Electro-magnetic Waves in Bent Waveguides Having Circular Cross-section

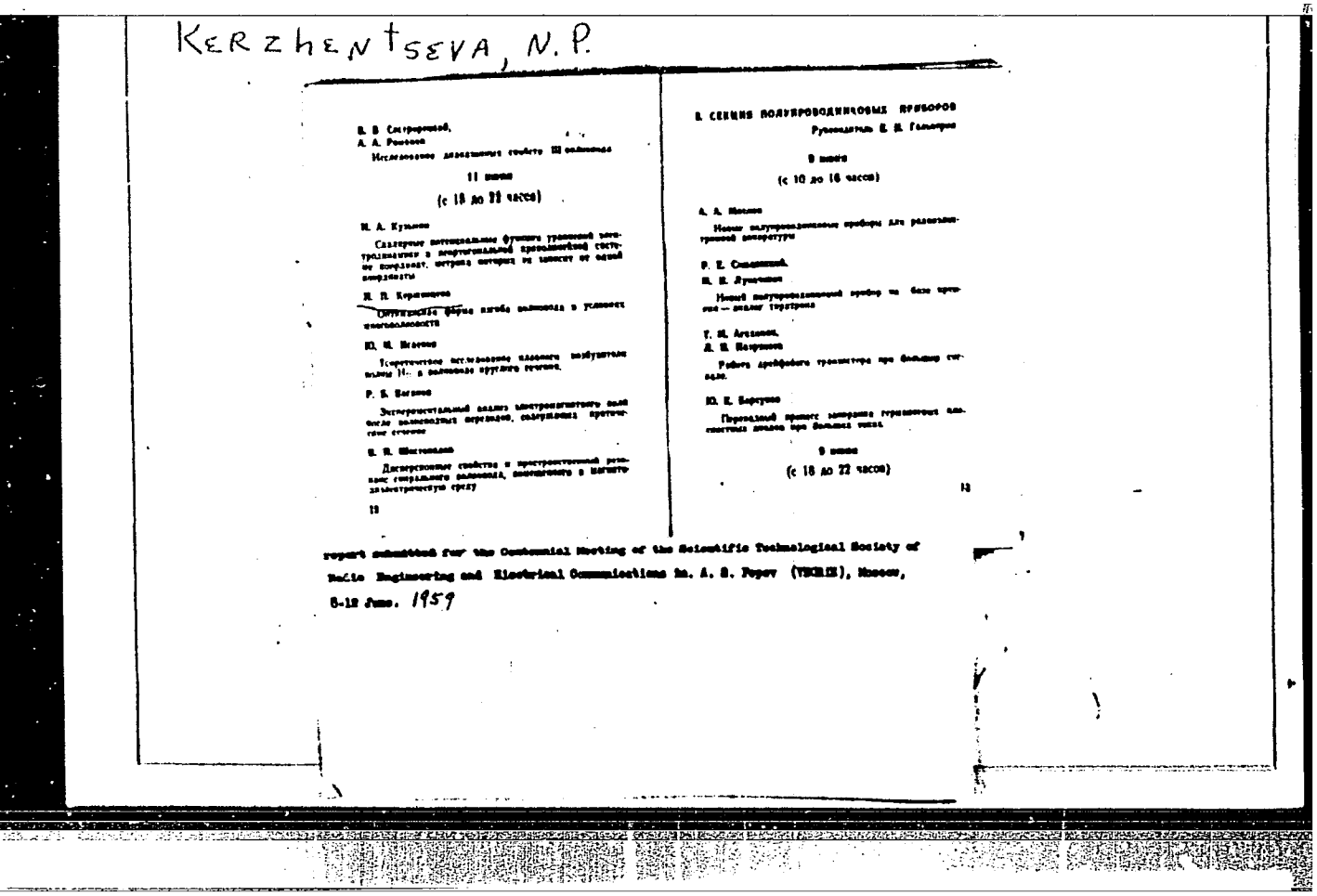
and if $b_o = e^{i\varphi_1}$, it is shown that its function φ_1 can be expressed by Eqs.(36) and (38).
There are 2 figures, 2 tables and 4 references, 2 of which are Soviet, 1 English and 1 French.

SUBMITTED: January 14, 1957

AVAILABLE: Library of Congress

Card 5/5 1. Electromagnetic waves-Propagation-Theory

KERZHENTSEVA, N.P.



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

SOV/109-59-4-2-24/27

AUTHOR: Kerzhentseva, N.P.

TITLE: Transmission of the H_{01}-Wave Through a Bent Helical Waveguide (O prokhozhdenii volny H_{01} cherez izognutyy spiral'nyy volnovod)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 2, pp 337-341 (USSR)

ABSTRACT: The author derives expressions for the coupling coefficients between H_{01}-wave and the parasitic waves produced in a bent helical waveguide. First, a ring-type waveguide is considered. The boundary conditions to be fulfilled by the system are expressed by Eq (1). The field components can be written as Eq (2) and (3). By considering Eq (2) and (3) and the boundary conditions of Eq (1), it is shown that the coupling coefficient between the waves H_{01} and EH_{1n} is given by Eq (7), while the coefficient for the waves H_{01} and HE_{1n} is in the form of Eq (8). The values of the first coupling coefficient for various ka are shown in the table on p 340; a denotes the radius of the waveguide cylinder. A helical waveguide can be described by employing the same boundary conditions (see Eq (1)), except that the

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Transmission of the H_{01}-Wave Through a Bent Helical Waveguide

correction factor of the order of Ψ is introduced. Here Ψ denotes the angle between the turns of the helix of the plane perpendicular to the axis of the waveguide. Similarly, the coupling coefficients may be expressed by Eq (7) and (8) with an error of the order of Ψ (Ψ being a small angle). The author expresses his gratitude to G.B.Linkovskiy for carrying out the calculations. There is 1 table and 4 references of which 3 are Soviet and 1 English.

SUBMITTED: 7th June 1958

Card 2/2

KERZHENTSEVA, N.P.

Selection of parameters for a currugated waveguide with H_{01} type wave. Nauch. dokl. vys. shkoly; radiotekh. i elektron. no.2:363-372 '59. (MIRA 14:5)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Wave guides)

KERZHENTSEVA, N.P., nauchnyy sotrudnik [translator]; ISAYENKO, Yu.M., nauchnyy sotrudnik [translator]; MERIAKRI, V.V., nauchnyy sotrudnik [translator]; SHTEYNSHLEYGER, V.B., kand.tekhn.nauk, red.; DANILOV, N.A., red.; IOVLEVA, N.A., tekhn.red.

[Low-loss wave guide transmission lines; collection of articles translated from the English] Volnovodnye linii peredachi s malymi poteriami; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1960. 478 p. (MIRA 13:6)

1. Institut radiotekhniki i elektroniki Akademii nauk SSSR (for Kerzhentseva, Isayenko, Meriakri).
(Wave guides) (Microwaves)

69916
S/109/60/005/05/004/021
E140/E435

9.1300

AUTHOR: Kerzhentseva, N.P.

TITLE: Waveguide Bends of Variable Curvature

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5, pp 733-739 (USSR)

ABSTRACT: Inhomogeneities in multi-wave waveguides cause the appearance of parasitic waves. Bends are one source of appreciable conversion loss. The only effective method of reducing conversion loss over a wide frequency band is the development of bends with variable curvature. The present paper solves the problem of the best shape of bend for reducing the amplitudes of all parasitic waves at the exit from the bend below a preassigned small quantity over a maximal frequency band with minimal bend length. The problem is analogous to the problem of current distribution in an antenna for optimal directivity or a wideband matching network to connect two lines with different wave impedances. The solution employs results obtained in the study of these questions (Ref 3,4). It is found that the ends of the bend form an angle to the rectilinear waveguides connected by the bend, giving

Card 1/2

9,1300

S/109/60/005/011/007/014
E140/E483

AUTHORS: Volkova, T.P. and Kerzhentseva, N.P.

TITLE: The Propagation of Fast Waves in a Helical Waveguide With Dielectric Envelope and Metal Screen

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.11, pp.1811-1817

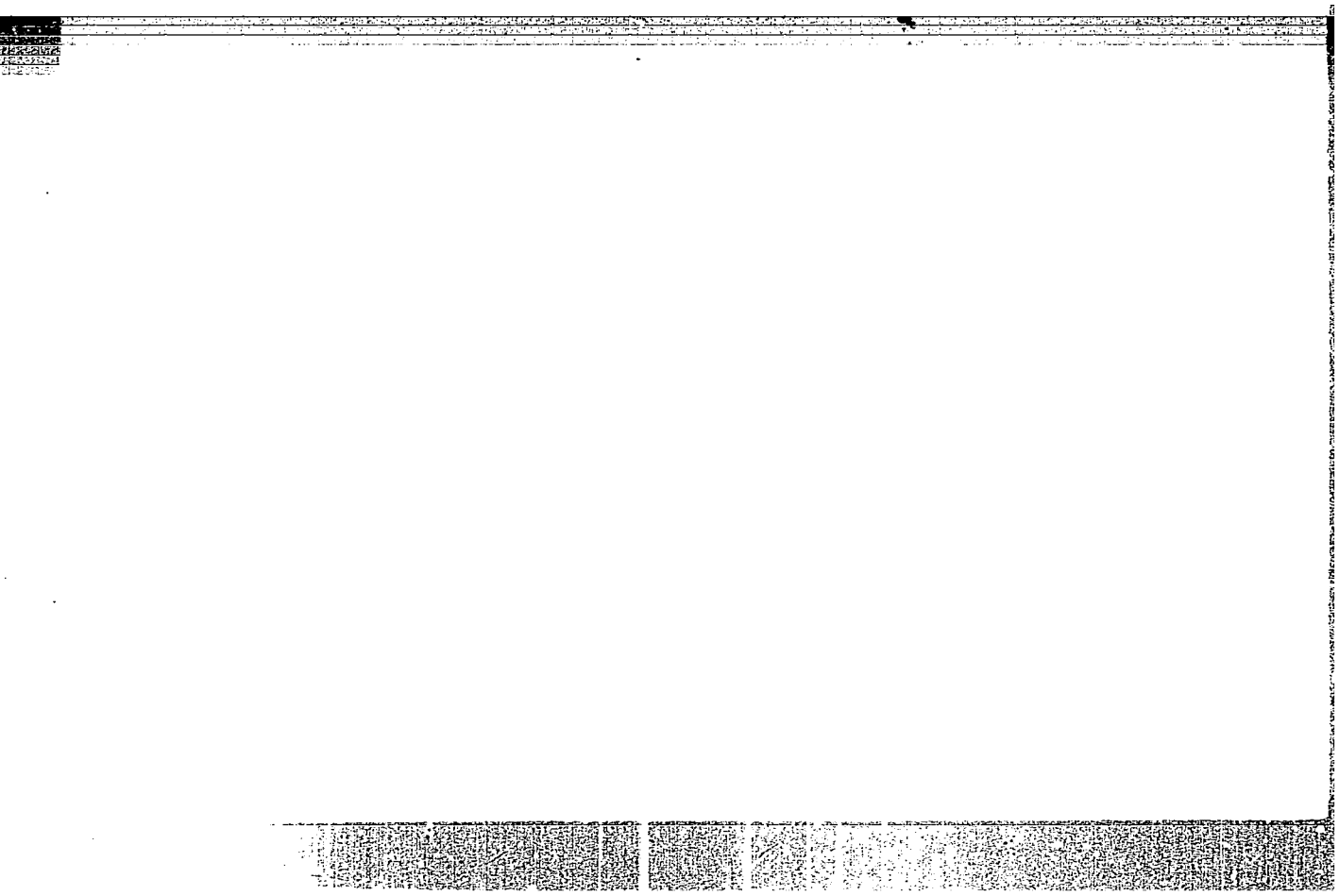
TEXT: The paper was presented at the Seminar of IRE AN SSSR (IRE AS USSR) on January 7, 1959.

The article considers a waveguide intended for the propagation of the H_{01}-wave. Such waveguides are used to design sharp bents, parasitic wave filters and long distance communication lines. The dispersion equation is derived and the dependence of asymmetrical wave characteristic values on dielectric thickness analysed. For certain dielectric thicknesses, increased attenuation of H_{0m}-waves can be obtained. There are 4 figures, 1 table and 5 references: 3 Soviet and 2 English.

SUBMITTED: January 16, 1960

Card 1/1

KERZHENTSEVA, N. P., Cand Tech Sci -- "Theoretical study of [illegible] multiwave WAVEGUIDES of circular ~~round~~ section." Mos, 1961. (Min of Higher and Sec Spec Ed RSFSR. Mos Order of Lenin Power Eng Inst) (KL, 8-61, 244)



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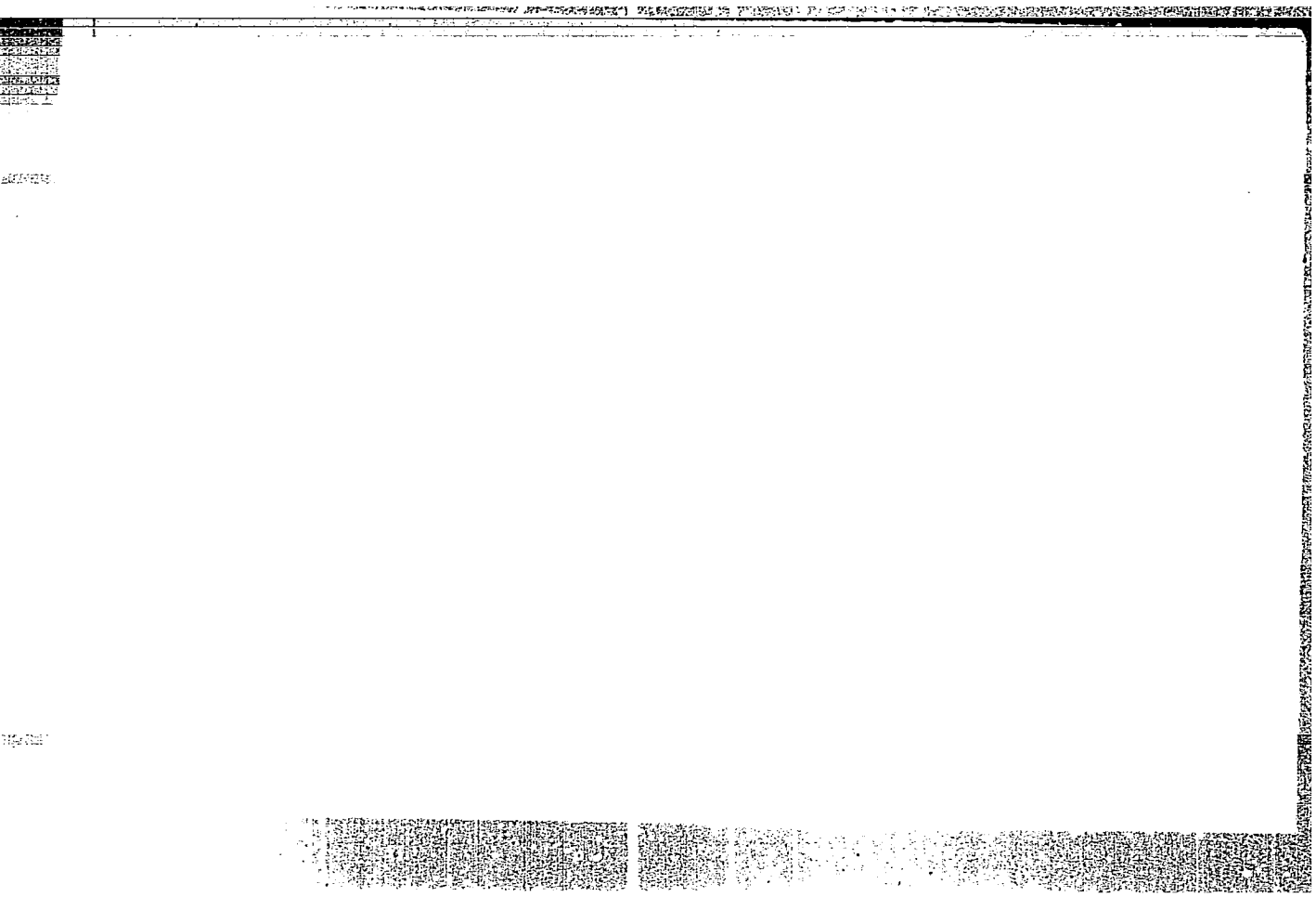

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ACC NR: AP6033472 SOURCE CODE: UR/0413/66/000/018/0058/0058

INVENTOR: Kerzhentseva, N. P.

ORG: None

TITLE: A waveguide filter-converter. Class 21, No. 185980 [announced by the Institute of Radio Engineering and Electronics AN SSSR (Institut radiotekhniki i elektroniki AN SSSR)]

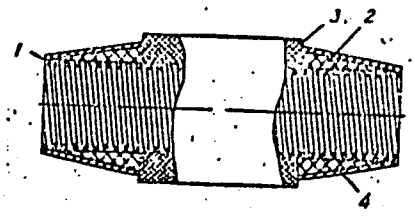
SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 58

TOPIC TAGS: waveguide filter, wave propagation, waveguide transmission, waveguide loss

ABSTRACT: This Author's Certificate introduces a waveguide filter-converter for an H_{12}-wave. The unit is made in the form of an annular or spiral waveguide section containing end zones surrounded by a dielectric and a central zone surrounded by an SHF-absorbing material. H_{12}-waves are converted to waves of strongly attenuated types and wave losses of the fundamental H_{01} type are reduced by using circular metal screens which touch the spiral line at one end. The diameter of the screens increases steadily as the central section is approached.

Card 1/2 UDC: 621.372.852.5

ACC NR: AP6033472 "APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721610007-7"



1--spiral waveguide; 2--end sections with dielectric; 3--central section; 4--screens

SUB CODE: 09/ SUBM DATE: 10Jun65

Card 2/2

KERZHNER, G.Ya., inzh.

Consultations on questions asked in our readers' letters. Svar. proizv. no.9:48 S '63. (MIRA 16:10)

1. Ural'skiy ordena Lenina, ordena Krasnogo Znameni i ordena Trudovogo Krasnogo Znameni zavod tyazhelogo mashinostroyeniya imeni Sergo Ordzhonikidze.

KERZHNER, G.Ya., inzh.

Consultations on questions asked in our readers' letters. Svar. proizv. no.9:48 S '63. (MIRA 16:10)

1. Ural'skiy ordena Lenina, ordena Krasnogo Znameni i ordena Trudovogo Krasnogo Znameni zavod tyazhelogo mashinostroyeniya imeni Sergo Ordzhonikidze.

KERZHNER, I.M.

New and little-known true bugs (Heteroptera, [illegible]) and other parts of the U.S.S.R. Trudy Zool. [illegible] 3:113-230 '64. (MIRA 18:2)

KERZHNER, I.M.

Bedbug. Zashch. rast. ot vred. i bol. 8 no.10:40-41 O '63.
(MIRA 17:6)

1. Zoologicheskiy institut AN SSSR.

ARNOL'DI, L.V.; BORKHSENIUS, N.S.; GUR'YEVA, Ye.L.; DERBENEVA, N.N.; YEMEL'YANOV, A.F.; KERZHNER, I.M.; KUZNETSOV, V.I.; LISINA, L.M.; MISHCHENKO, L.L.; NARCHUK, E.P.; SHAPIRO, I.D.; SHAPOSHNIKOV, G.Kh.; SHTAKEL'BERG, A.A.; PUKHAL'SKAYA, L.F., red.izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Insect pests of corn in the U.S.S.R.; reference book] Nasekomye, vrediashchie kukuruze v SSSR; spravochnik. Moskva, 1960. 227 p. (MIRA 13:3)

1. Akademiya nauk SSSR. Zoologicheskiy institut. 2. Zoologicheskiy institut AN SSSR (for Arnol'di, Borkhsenius, Gur'yeva, Derbeneva, Yemel'yanov, Kerzhner, Kuznetsov, Mishchenko, Narchuk, Shaposhnikov, Shtakel'berg). 3. Vsesoyuznyy institut zashchity rasteniy Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Lisina, Shapiro).

(Corn (Maize)--Diseases and pests)
(Insects, Injurious and beneficial)

KERZHNER, I. M.

New species of Heteroptera of the U.S.S.R. Trudy Zool. inst. 30: 139-155 '62. (MIRA 15:10)

(Dzungarian Ala-Tau—Heteroptera)

KERZHNER, I.M.

Notes on some Heteroptera of Leningrad Province. Trudy Zool. inst. 31:46-48 '62. (MIRA 16:1)
(Leningrad Province—Heteroptera)

KERZHNER, I.M.

Distribution of Elasmostethus brevis Lindb. (Heteroptera, Acanthosomatidae). Zool. zhur. 43 no.10:1563-1565 '64.
(MIRA 17:12)

1. Zoological Institute, Academy of Sciences of the U.S.S.R. (Leningrad).

KERZHNER, I.M.

Materials on the taxonomy of leaf bugs (Heteroptera, Miridae) of the U. S. S. R. Ent. oboz. 41 no.2:372-387 '62.
(MIRA 15:11)

1. Zoologicheskiy institut AN SSSR, Leningrad.
(Leaf bugs)

KERZHNER, I.M.

Materials on the synonymy of stinkbugs (Heteroptera, Pentatomodiea) of the fauna of the U.S.S.R. and neighboring countries. Ent.oboz. 43 no.2:363-367 '64. (MIRA 17:9)

1. Zoologicheskiy institut AN SSSR, Leningrad.

3487 KERZHNER, YA A.

Tekhnika vezopasnosti, promsanitariya i gigiena v vinodel'cheskoy promyshlennosti. Kishknez, 1954. 30 s. 20 sm (Sovet nauch. inzh. Tekhn obshchestv moldav. SSSR. In-T usovershenstovovaniya znaniy spetsial istov nar. Khozyaystva. Tsikl Tekhnologiya vinodeliya Lektsiya no. 16). 250 ekz B. ts. avt. Ukazan na 3-ys. (54-57748) 663.2 658.283

KEHY, Ferenc; dr.; KALAPOS, Erzsebet, dr.

A case of Strongyloides stercoralis infection with recovery.
Orv.hetil. 101 no.28:995-997 10 Jl '60.

1. Budapesti Koranyi Frigyes es Sandor Kozkorhaz II. Belosztaly es Laboratorium.
(STRONGYLOIDIASIS case reports)

SERGEYEVA, Z.I.; KERZHKOVSKAYA, Ye.M.

Dyeing of polyethylene. Plast.massy no.6:31-33 '62. (MIRA 15:6)
(Polyethylene) (Dyes and dyeing--Plastics)

KERZHNER, I.M.

Taxonomy and intraspecific variability in the genus Corizus Fall. (Heteroptera, Coreidae). Zool. zhur. 41 no.6:875-881 Je '62. (MIRA 15:7)

1. Zoological Institute, Academy of Sciences of the U.S.S.R., Leningrad.

(Coreidae)

KERZINA, M. N.

"The Role of Cut-Out and Burned-Out Spots in the Formation and Ecology of Forest Fauna," Sub. 23 Apr 47, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO: Sum.No.457, 18 Apr 55

KERZINA, M. N.

"The Mass Propagation of the Oak Corydalis, Notodonta Trepida Esp. and Its Destruction by Birds," Zool. zhur., 28, No.4, 1949.

Sector of Parasitology and Medical Zoology, Inst. Exptl. Med., AMS USSR

KERZINA, M. N.

KAFTANOVSKIY, Yu.M.; OGNEV, S.I., prof., red.; KERZINA, M.N., red.

[Auks of the eastern part of the Atlantic Ocean] Chistikovye ptitsy Vostochnoi Atlantiki. Moskva, Izd-vo Mosk. ob-va ispytatelei prirody, 1951. 171 p. (Materialy k poznaniiu fauny i flory SSSR. Otdel zoologicheskii, no.28(43)). (MIRA 11:3)

(Atlantic Ocean--Auks)

KERZINA, M.N.

SKALON, V.N.; TSALKIN, V.I., nauchn. red.; KERZINA, M.N., red.; GRECHANINOVA, A.A., khudozhestvenno-tekhn. red.

[River beavers of northern Asia] Rechnye bobry Severnoi Azii. Moskva, Izd-vo Mosk. ob-va ispytatelei prirody, 1951. 205 p. (Materialy k poznaniiu fauny i flory SSSR. Otdel zoologicheskii, no.25).
(Asia--Beavers) (MIRA 11:3)

KERZINA, M. N.

Forest Fauna

Change in population of terrestrial vertebrates in forest clearings produced by felling of trees and by fires. Biul. MOIP. Otd. biol. 57 No. 1, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

NASIMOVICH, A.A.; KERZINA, M.N., redaktor; GRECHANINOVA, A.A., tekhnicheskiy redaktor.

[Transformation of the vertebrate fauna of our country; biotechnical measures] Preobrazovanie fauny pozvonochnykh nashei strany. Biotekhnicheskie meropriiatiia. Moskva, Izd. Moskovskogo ob-va ispytatelei prirody, 1953. 234 p. (MLRA 7:8)
(Vertebrates)

KERZINA, M.N.

Effect of cutover and burnt-over areas on the development of forest fauna. Mat.k pozn.fauny i flory SSSR.Otd.zool. no.35:217-304 '56.
(MLRA 10:5)

(Forest fauna)

KERZNER, V., inzh.; BEKKER, A., inzh.

Machine for making milk beverages. Obshchestv. pit. no. 8:23-25 Ag '60. (MIRA 14:4)
(Restaurants, Lunchrooms, Etc.—Equipment and supplies)

KERZNER, V.; BEKKER, A.

Automatic saturator. Obshchestv. pit. no.7:56 Jl '61.
(MIRA 14:8)
(Poland--Carbonated beverages--Equipment and supplies)

KERZNER, Ya. M.

KERZNER, Ya.M.; RAYKHLIN, A.P.

Working conditions at electric substations of the Moscow Ryazan railroad. Gig.i san. no.5:50 My '54. (MLRA 7:5)

1. Iz sanitarno-gigiyenicheskoy laboratorii Moskovsko-Ryazanskoy zheleznoy dorogi. (Electric substations--Sanitation)
(Mercury--Toxicology)

KERZNER, Ye.L.

Fryer with a withdrawable heating surface. Kons. i ov. prom. 14 no.1:12-16 Ja '59. (MIRA 12:1)

1.Stalingradskiy konservnyy zavod.
(Canning and preserving--Equipment and supplies)

KERZON, I.

"Modernization of Drying Rooms in an Obsolete System. Tr. From the Russian", P. 141, (FAIPAR, Vol. 4, No. 5, May 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.