of the dam sagged faster than others during construction. After 6 months of operation, the sag of the dam amounted to 0.5-1.8 m after which it stopped sagging (Figure 1). After a year the dam was levelled off and has remained unchanged. It was observed that 1) the sag of the crest of the dam is not in proportion to the width of the muddy deposits because the maximum sagging of 1.8 m occurred around borehole Nr 1, where the width of the weak muddy soil was considerably less than around borehole Nr 2. The sag of the base of the dam is in proportion to the width of the muddy subsoil in accordance with the data obtained from all 5 boreholes. 2) the sagging of the bottom of the dam, as revealed by boreholes, was as follows: Nr 1 - 1.2 m, Nr 2 - 2.5 m, Nr 3 - 2.3 m, Nr 4 - 1.6 m and Nr 5 - 2.7 m. The average sagging is approximately 2.1 m, which is roughly 50% of the stratum of muddy soil. 3) the nature of the sagging of the body of the dam around boreholes, Nr 3 - 4 took place during construction. The remaining sag of 0.8 m occurred only after the dam was completed. Around boreholes Nr 1-4, sagging was slower and developed principally after completion of the dam. 4) the cross section profiles of the dam remained practically unchanged (Figure 2). 5) although the dam has been built from the same material throughout, filtration

AN Earth Dam on a Weak Muddy Foundation

98-58-3-6/22

characteristics of the soil vary in different parts of the dam. There are 2 figures.

Card 3/3 1. Dams-Construction 2. Dams-Test methods

KUZOVLEV, G.M., inzh.

Changes in the All-Union state standard for determining the permeability of concretes used for hydraulic structures. Gidr. stroi. 30 no.1:40-43 Ja '60. (MIRA 13:5)
(Concrete--Permeability)

KUZOVLEV, G.M., inzh.; GAPEYEV, S.P.

Use of asphalt-concrete lining. Gidr. i stroi. 30 no.5:22-25 My '60. (MIRA 14:5)

(Asphalt concrete)
(Reservoirs)

KUZOVLEV, G.M.; MERZON, M.I.

Some notes on the design of water-intake buckets. Vod. i san. tekh. no.3:21-23 Mr '61. (MIRA 14:7)
(Water-supply engineering)

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21605

S/097/61/000/007/001/001
D054/D112

AUTHOR: Kuzovlev, G.M., Engineer

TITLE: On planning and calculating especially-heavy and hydrated concretes

PERIODICAL: Beton i zhelezobeton, no. 7, 1961, 312-315

TEXT: A method of calculating the correct composition of especially-heavy and hydrated concretes with a volumetric weight of over 2.6 t/m$^3$ is described. These concretes are used in constructions designed to provide protection against radioactivity. Hydrated concretes should have a content of chemically-combined water exceeding 20% of the weight of the cement. Aggregates used in these concretes are either crushed limonite ($F_2O_3 3H_2O$) or aggregates having a formula $Mn\ H_2O$, where M is the chemical composition of the aggregate and n is the number of molecules of chemically combined water. Heavy iron ores and barytes are usually used as aggregates in especially heavy concretes, but other aggregates can also be used provided they have the required volumetric weight. The following table shows the relationship between the volumetric weight of concretes and that of their aggregates:

Card 1/7

On planning and calculating ....

| Volumetric weight of concretes in $t/m^3$ | Volumetric weight of aggregates in $t/m^3$ |
|---|---|
| 2.8 | 3.3 - 3.5 |
| 2.9 | 3.4 - 3.6 |
| 3. | 3.6 - 3.8 |
| 3.1 | 3.7 - 3.9 |
| 3.2 | 3.8 - 4. |
| 3.3 | 4. - 4.1 |
| 3.4 | 4.1 - 4.2 |
| 3.5 | 4.3 - 4.4 |
| 3.6 | 4.4 - 4.5 |
| 3.8 | 4.7 - 4.8 |

Card 2/7

21605
S/097/61/000/007/001/001
D054/D112

On planning and calculating ....

| Volumetric weight of concretes in $t/m^3$ | Volumetric weight of aggregates in $t/m^3$ |
|---|---|
| 2.8 | 3.3 - 3.5 |
| 2.9 | 3.4 - 3.6 |
| 3. | 3.6 - 3.8 |
| 3.1 | 3.7 - 3.9 |
| 3.2 | 3.8 - 4. |
| 3.3 | 4. - 4.1 |
| 3.4 | 4.1 - 4.2 |
| 3.5 | 4.3 - 4.4 |
| 3.6 | 4.4 - 4.5 |
| 3.8 | 4.7 - 4.8 |

Card 2/7

On planning and calculating ....

If needed, a higher volumetric weight of aggregate can be obtained by the addition of metallic scraps or steel shots, provided that the composition of the concrete is uniform throughout. Until this question has been studied in greater detail, the scrap-rubble ratio should not exceed 0.5 : 1; only the amount of scrap may be increased. Practice has shown that the relationship between the components of especially heavy concretes is similar to that of conventional-type concretes. According to NIIZhB, this relationship is expressed in two extreme - maximum and minimum - formulas:

$$R_{concr} = 0.55R_{cem}(Cem/W - 0.5) \quad (1)$$

and

$$R_{concr} = 0.45R_{cem}(Cem/W - 0.6) \quad (2)$$

The dependence of $R_{concr}$ on the Cem/W ratio must be tested on actual aggregates before fixing the composition of the concrete mix. When hydrated ore sand is used as an aggregate, the water consumption will increase 10-15% in comparison with conventional-type concrete and will further increase by 20% if hydrated ore rubble is also used. To diminish the cleavage of the

Card 3/7

On planning and calculating ....

concrete mix it is recommended to consider that the size of the cone slump is 0 - 4 cm, and to prepare very tough concrete mixes. The composition of especially heavy concretes can be determined by the following method. When $R_{28}$ = 300 kg/cm$^2$, $R_{cem}$ = 400 kg/cm$^2$ and the volumetric weight (v) of the concrete is 3.6 t/m$^3$, the Cem/W ratio can be calculated from the formula (1)

$$Cem/W = \frac{R_{concr}}{R_{cem} \cdot 0.55} + 0.5 = \frac{300}{400 \cdot 0.55} + 0.5 = 1.88.$$

The average water consumption for the accepted 3-4 cm cone slump is 175 kg/m$^3$, whence

$$Cem = Cem/W \times W = 1.88 \times 175 = 330 \text{ kg/m}^3$$

The amount of chemically combined water in concrete made from portland cement with a water content of up to 20% will be

$$Cem = 0.2 = 330 \times 0.2 = 66 \text{ kg/m}^3$$

[Abstracter's note: Obvious misprint in the left side of the equation. The symbol must be W (for water)]

Card 4/7

On planning and calculating ....

The concrete will loose during the drying out process

$$175 - 66 = 109 \text{ kg/m}^3$$

of water, and its rated volumetric weight ($v'$) has to be increased by 109 kg, i.e.,

$$v'_{concr} = v_{concr} + 109 = 3{,}709 \text{ kg/m}^3 .$$

The weight of the aggregates (A) will be

$$A = v_{concr} - (Cem + W) = 3{,}709 - (330 + 175) = 3204 \text{ kg}$$

The sand/rubble ratio is usually between 0.47 and 0.55. Taking the mean sand/rubble ratio as 0.5 we obtain

$$\text{Sand} = 3{,}204 \times 0.33 = 1{,}057 \text{ kg}$$

$$\text{Rubble} = 3{,}204 \times 0.67 = 2{,}146 \text{ kg} .$$

Card 5/7

On planning and calculating ....

*The total weight (S) of 1 $m^3$ of freshly laid concrete will be*

$$S = A + Cem + W = 3,204 + 330 + 175 = 3,709 \text{ kg}$$

*and after the drying out*

$$S' = 3,709 - 109 = 3,600 \text{ kg}.$$

*The volume of aggregates will be*

$$A = 100 - \left(\frac{Cem}{3.1}\right) - W = 1,000 - \left(\frac{300}{3.1}\right) - 175 = 0.74 \text{ m}^3$$

[Abstracter's note. Obvious misprints: the first number in the right part of the equation must be 1,000]

The volumetric weight of the aggregate block will be

$$\Delta = \frac{3,204}{0.719} = 4.45 \text{ t/m}^3$$

The same method is applicable for determining the composition of special hydrated concretes, but the formula (2) is to be used in this case. If the

Card 6/7

21605
S/097/61/000/007/001/001
D054/D112

On planning and calculating ....

amount of chemically combined water in the concrete mix is less than required, the usual portland cement can be replaced by the aluminum cement. In cases when aggregates (sand and rubble) are made of different materials and the rubble contains not less than 50% of metallic scrap, the preliminary calculation of volume and weight of aggregates (X for sand, Y for rubble and Z for scrap) is made as follows. The volume of X is 50% of the volume of Y + Z, or $2X = Y + Z$; the total volume $V_z = X+Y+Z$; the total weight of all aggregates = $\Delta$, whence $\gamma \cdot (X+Y) + 7.8Z = \Delta$; the volume of scrap is 50% of the volume of rubble, so that $2Z = Y$. The solution of these equations gives the preliminary composition of the concrete mix with added scrap. The name of Professor Skramtayev is mentioned in the article. There is 1 table.

X

Card 7/7

KUZOVLEV, G.M., inzh. (Leningrad)

Some notes on the design of large sea water intakes. Vod. i san. tekh. no.1:17-19 Ja '64 (MIRA 18:2)

KUZOVLEV, G.N., inzh.; MERZON, M.I., inzh.

Draining the channels of heat networks. Vod. i san. tekh. no.2: 9-12 F '64 (MIRA 18:2)

KUZOVLEV, G.M.

Consolidation of the shore in the area of the Kudepsta River estuary. Transp. stroi. 15 no.9:22-23 S '65.
(MIRA 18:11)

KUZOVLEV, G.M., inzh. (Leningrad)

Designing reservoirs and sea water intakes with canals. Vod. i san. tekh. no.1:3-5 Ja '66. (MIRA 19:1)

ACC NR: AP6034015 SOURCE CODE: UR/0213/66/006/005/0906/0911

AUTHOR: Solov'yev, A. N. (Leningrad); Kuzovlev, G. M. (Leningrad)

ORG: none

TITLE: Water-temperature anomaly near the middle of the east coast of the Caspian Sea

SOURCE: Okeanologiya, v. 6, no. 5, 1966, 906-911

TOPIC TAGS: hydrographic survey, temperature gradient, hydrometeorology, ocean property, sea water, low temperature, water temperature / Caspian Sea

ABSTRACT: The summer water temperature trends are analyzed using long-period observations from a number of hydrometeorological stations in the middle of the west and east coasts of the Caspain Sea. Some examples showing the dependence of water temperature on the wind-induced onshore and offshore movements of water are given. The hypothesis attributing the abnormally low water temperatures near the east coast of the Caspian Sea to the inflow of ground water is shown to be unfounded. The main cause for the lower water temperature near the east coast as compared to the west coast is the offshore movements of water. Orig. art. has: 4 tables.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006

Card 1/1 UDC: 551.465.46/62/63(262.8)

GUSARSKIY, V.V.; KUZOVLEV, I.A.

New method for the quantitative spectral determination of elements.
Zav.lab. 26 no.12:1375-1378 '60. (MIRA 13:12)
(Trace elements—Spectra)

GUSARSKIY, V.V., inzh.; KUZOVLEV, I.A., inzh.

Effect of aluminum on the grain size of MA8 alloys. Metalloved. i term. obr.met. no.2:57 F '61. (MIRA 14:3)
(Magnesium-manganese alloys—Metallography)

KUZOVLEV, I.A.; GUSARSKIY, V.V.

Spectral method for determining a thousandths of one per cent of boron in aluminum alloys. Zav. lab. 28 no.9:1076-1078 '62. (MIRA 16:6)

(Aluminum alloys—Spectra)
(Boron—Analysis)

L 18913-63 BDS/EWT(m)/EWP(q) AFFTC/ASD JG/JD

ACCESSION NR: AP3006609 S/0129/63/000/009/0057/0058

59

AUTHORS: Gusarskiy, V. V.; Kuzovlev, M. A.

TITLE: Fining of MA8 alloy grains

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 9, 1963, 57-58

TOPIC TAGS: Alloy, metal, metal fining, MA8 alloy, metal grain structure, VM65-1 alloy, Zn, Zr, Mg, Mn, Ce, zinc, zirconium, magnesium, manganese, cerium

ABSTRACT: Authors developed a method for fining the structure of the MA-8 alloy (magnesium-manganese-cerium) which makes it possible to obtain up to 80% fine grain and from 1 to 3% coarse grain. The remainder consists of average grains. The fining effect is obtained by introducing VM65-1 alloy rejects into the charge. VM65-1 alloy contains 5.5% Zn and 0.5% Zr. Orig. art. Has: 1 table.

Card 1/1

SLOBODIN, V.M.; IVANYUK, Yu.I.; KUZOVLEV, P.N.; NAGAYEV, Yu.A., LUPAREVA, T.F.; MESHCHANINOV, S.I.; BRYUKHOV, Yu.A.; SYCHEVA, F.A.; KOSYAKOV, P.O., red.; ZANOVA, N.N., red.izd-va; TAMKOVA, N.F., tekhn.red.

[Distribution and specialization of agriculture in Chelyabinsk Province] Razmeshchenie i spetsializatsiia sel'skogo khoziaistva Cheliabinskoi oblasti. Sverdlovsk, AN SSSR, 1963. 204 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Ural'skiy filial, Sverdlovsk. Otdel ekonomicheskikh issledovaniy.
(Chelyabinsk Province--Agriculture--Economic aspects)

GORDIYENKO, P.I., inzh.; KUZOVLEV, S.A., monter

Suggestions of the efficiency experts. Avtom., telem. i sviaz' 4 no.10:29-30 O '60. (MIRA 13:10)

1. Krymskaya distantsiay signalizatsii i svyazi Severo-Kavkazskoy dorogi (for Gordiyenko). 2. Mogochinskaya distantsiya signalizatsii i svyazi Zabaykal'skoy dorogi (for Kuzovlev).
(Railroads--Signaling)
(Railroads--Communication systems)

KUZOVLEV, S. M.

36157 Lityye shtampy. Torf. promst', 1949, No. 11, S. 16-17.

SO: Letopis' Zhrunal'nykh Statey, No. 49, 1949

KUZOVLEV, S.P., agronom-entomolog

More attention to the biological method. Zashch.rast.ot vred.i bol. 5 no.7:14 Jl '60. (MIRA 16:1)

1. Tashoblotryad po Bostandykskomu rayonu.
(Bostandykskiy District--Insects, Injurious and beneficial--Biological control)

KUZOVLEV, V. A.

KUZOVLEV, V. A. Marine steam-boilers and engines; a text-book. Moskva, Izd-vo Ministerstva rechnogo flota SSSR, 1949. 261 p. (50-38220)

VM741.K85

KUZOVLEV, V.A., inzhener-mekhanik; TAREYEV, V.M., doktor tekhnicheskikh nauk, professor, redaktor.

[Technical thermodynamics] Tekhnicheskaia termodinamika. Izd.3. Pod obshchei red. V.M.Tareeva. Moskva, Gos.izd-vo vodnogo transporta, 1953. 330 p. (MLRA 7:3)
(Thermodynamics)

Kuzovlev, Vitaliy Aleksandrovich

KUZOVLEV, Vitaliy Aleksandrovich; TAREYEV,V.M., redaktor; PLAKHOV,V.S., retsenzent; MARTIN,V.G., retsenzent; SHLYAKHNIKOVA,Z.V., redaktor; KRASNAYA,A.K., tekhnicheskiy redaktor

[Principles of heat engineering] Osnovy teplotekhniki. Moskva, Izd-vo "Rechnoi transport," 1955. 195 p. (MLRA 9:3)
(Heat engineering)

KUZOVLEV, Vitaliy Aleksandrovich; TAREYEV, V.M., professor, doktor tekhnicheskikh nauk, redaktor; SHLENNIKOVA, Z.V., redaktor izdatel'stva; KRASNAYA, A.K., tekhnicheskiy redaktor

[Technical thermodynamics] Tekhnicheskaia termodinamika. Izd. 4-oe. Pod obshchei red. V.M.Tareeva. Moskva, Izd-vo "Rechnoi transport," 1956. 338 p. (MLRA 9:8)
(Thermodynamics)

KUZOVLEV, Vitaliy Aleksandrovich,; KOMOGORTSEV, P.Ya., red.; POTAPOV, N.S., retsenzent,; KAN, P.M., red. izd-va,; KUZ'MIN, G.M., tekhn. red.

[Steam boilers and engines for river and lake vessels] Rechnye parovye kotly i mashiny. Izd. 3., ispr. i dop. Moskva, Izd-vo "Rechnoi transport." Pt. 1. 1958. 301 p. (MIRA 11:11)
(Marine engines)
(Boilers, Marine)

BIRYUKOV, Vasiliy Kuz'mich, KUZOVLEV, V.A., retsenzent, AKIMOV, P.P., red.; VOLCHOK, K.M., tekhn.red.

[Internal combustion marine engines] Sudovye dvigateli vnutrennego sgoraniia. Izd. 3. Leningrad, Izd-vo "Rechnoi transport," Leningrad. otd-nie, 1958. 360 p. (MIRA 11:9)
(Marine engines)

KUZOVLEV, Vitaliy Aleksandrovich; TAREYEV, V.M., prof., doktor tekhn. nauk, red.; VOLCHOK, K.M., tekhn.red.

[Principles of heat engineering] Osnovy teplotekhniki. Pod red. V.M.Tareeva. Izd.2. Leningrad, Izd-vo "Rechnoi transport," Leningr.otd-nie, 1960. 199 p. (MIRA 13:11)
(Heat engineering)

KUZOVLEV, Vitaliy Aleksandrovich; STOTSKIY, L.R., dots., kand. tekhn. nauk, nauchn. red.; SHLENNIKOVA, Z.V., red.

[Engineering thermodynamics] Tekhnicheskaia termodinamika. Izd.5., znachitel'no perer. Moskva, Izd-vo "Transport," 1964. 221 p. (MIRA 18:1)

KUZOVLEV, V.F.; TARASOV, M.S.

Remote control for connecting and disconnecting devices on large excavators. Prom. energ. 16 no.4:12 Ap '61. (MIRA 14:9)
(Remote control) (Excavating machinery)

KUZOVLEV, V.V.; STANKEVICH, K.S.

Effective height of absorption of radio waves in the centimeter band in atmospheric oxygen and water vapor. Izv. vys. ucheb. zav.; radiofiz. 7 no.1:175-176 '64. (MIRA 17:3)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

ACCESSION NR: AP4024478 S/0141/64/007/001/0175/0176

AUTHORS: Kuzovlev, V. V.; Stankevich, K. S.

TITLE: Effective height of absorption of radio waves in the centimeter band by atmospheric oxygen and water vapor

SOURCE: IVUZ. Radiofizika, v. 7, no. 1, 1964, 175-176

TOPIC TAGS: absorption, absorption by oxygen, absorption by water vapor, radio wave absorption, decimeter band absorption, effective absorption height, absorption height seasonal variation

ABSTRACT: It is found that for a real pressure and temperature distribution in the atmosphere the effective absorption height of oxygen is not constant, but subject to seasonal variations amounting to $5 \pm 0.2$, $3.9 \pm 0.4$, and $4.6 \pm 0.2$ km in the summer, winter, and spring or fall, respectively. The reason for the seasonal variation is the dependence of the effective height on the earth's surface

Card 1/2

ACCESSION NR: AP4024478

temperature. The effective height calculated for water vapor shows no regular behavior and has an average value of 1.8 km. The use of the effective height becomes unadvisable during the time of an inversion. Orig. art. has: 1 figure.

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute at the Gor'kiy University)

SUBMITTED: 10Jun63 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: AS, PH NR REF SOV: 001 OTHER: 001

Card 2/2

KUZOVLEVA, A.P.

Manufacture of locknit warp fabrics with an even width. Tekst. prom. 20 no.8:35-36 Ag '60. (MIRA 13:9)
(Knit goods)

KUZOVLEVA, F.Ya., inzh.; PEKKER, I.I., kand.tekhn.nauk

Verification calculation of a shell-type electromagnet using a digital computer. Elektrotekhnika 35 no.4:52-54 Ap '64. (MIRA 17:4)

KUZOVLEVA, Faina Yakovlevna; PEKKER, Ioel' Josifovich, kand. tekhn. nauk, dotsent

Calculation of the static characteristics of a.c. electromagnets using a digital computer. Izv. vys. ucheb. zav.; elektromekh. 7 no.5:626-627 '64. (MIRA 17:9)

1. Vychislitel'nyy tsentr Novocherkasskogo politekhnicheskogo instituta (for Kuzovleva). 2. Kafedra avtomatiki i telemekhaniki Novocherkasskogo politekhnicheskogo instituta (for Pekker).

KUZOVLEVA, Faina Yakovlevna; PEKKER, Ioel' Iosifovich, kand.tekhn.nauk, dotsent

Approximation of magnetization curves using electronic digital computers. Izv.vys.ucheb.zav.; elektromekhanika 8 no.6:611-614 '65. (MIRA 18:8)

1. Starshiy inzhener vychislitel'nogo tsentra Novocherkasskogo politekhnicheskogo instituta (for Kuzovleva). 2. Kafedra avtomatiki i telemekhaniki Novocherkasskogo politekhnicheskogo instituta (for Pekker).

KUZOVLEVA, N.P.

USSR / Pharmacology, Toxicology. Chemotherapeutic Agents. U-7

Abs Jour : Ref. Zh.-Biol., No 2, 1958, No 8160

Author : Kuzovleva, N.P., Nazareva, E.M., Yegorova, I.N., Shatskaya, T.N.

Inst :

Title : Experiments on the Use of Leucine and Tyrosine Sulfite with Other Drugs in the Treatment of Tuberculous Meningitis.

Orig Pub : Tr. Konferentsii Po Proizv-vu i Ispol'zovaniyu Aminokislot V Med. M., MGU, 1956, 127-234.

Abstract : In the treatment of tuberculous meningitis, the authors used leucine containing preparations (Composition: 3% glycine and leucine, 0.5% glutamic acid, 10% glucose, 5% sorbose and 1% NaCl) and a 2% solution of tyrosine sulfite

Card : 1/3

USSR / Pharmacology, Toxicology. Chemotherapeutic Agents. U-7
APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928310002-6"
Abs Jour : Ref. Zh.-Biol., No 2, 1958, No 8160

Abstract : in 40% fructo-glucose. Leucine and tyrosine-sulfite were used in 11 children from 2 to 14 years of age, 9 of whom received leucine and 2 tyrosine sulfite, in the acute and chronic stages of tuberculous meningitis and during relapses. Both preparations were used intravenously every other day (4-5 ml given to children under 2 years, 10-15 ml to children over 10 years; 9-23 injections were given during the course of treatment) and orally (1 dessertspoon t.i.d.). Clinical observations have revealed (abstracts from case histories were given) that the use of leucine and tyrosine preparations was harmless and was well tolerated by children, was accompanied by very few side effects, assisted in restoring neural functions, and accelerated the normalization of psychic processes in children. Combined antibacterial-aminoacid therapy undoubtedly had a favorable effect on the course of the disease, especially in its chronic form, improved the sense of general well-being, shortened the

Card : 2/3

USSR / Pharmacology, Toxicology. Chemotherapeutic Agents. U-7

KUZOVLEVA, O. B.

Biological Chemistry

Dissertation: "Data on the Problem Concerning the Mechanism of Protein Formation in the Liver From Intravenously Administered Proteins of Blood Serum." Cand Biol Sci, Acad Med Sci USSR, 6 Apr 54. (Vechernyaya Moskva, Moscow, 24 Mar 54)

SO: SUM 213, 20 Sept 1954

KUZOVLEVA, O.B.

The conversion of intravenously introduced serum proteins into tissue proteins. O. B. Kuzovleva (Inst. Biol. and Med. Chem., Acad. [illegible], Moscow). *Biokhimiya* 19, 413-604 (1954).—White rats of 120-150 g. were used as exptl. animals. Labeled homologous methionine-$S^{35}$ and tyrosine and glycine contg. $C^{14}$ in the carboxyl group were employed in intravenous injections. Eight hrs. following animals were killed, and the serum analyzed.

The intravenous injection of methionine-$S^{35}$ and tyrosine-$C^{14}$ is followed by a rapid appearance of the labeled amino acids in the protein as well as the nonprotein compds. of the liver. At first the nonprotein elements lag behind the proteins, but following 4 hrs. more of the $C^{14}$ is found in the nonprotein components. The appearance of even small amts. of the labeled agents in the nonprotein compds. of the liver in a short time indicates that some degree of splitting of amino acids takes place in the liver. The shift in the quant. relation of the labeled and nonlabeled methionine in the liver has no effect on the degree of activity of the liver proteins. As [illegible] possible splitting of the injected proteins into [illegible] takes place in the process of liver protein formation [illegible] A considerable part of the [illegible] labeled methionine and tyrosine may enter [illegible] liver proteins appears in the fraction of structural proteins sol. in $H_2O$ with difficulty.

B. S. Levine

Kuzovleva, O.B.

USSR/Medicine - Nutrition FD-1760

Card 1/1 Pub 141-7/15

Author : Kuzovleva, O. B.

Title : Changes in the content of free aminoacids in the livers of white rats maintained on a low protein diet

Periodical : Vop. pit., 30-34, Jan/Feb 1955

Abstract : The total amount of free aminoacid nitrogen in the livers of adult white rats varies between 63.2-99.7 milligram per cent. After the animal has been maintained on a diet having only three per cent protein for 3-15 days, the amount of free aminoacid nitrogen in the liver does not increase. Insignificant increases are detected only in animals maintained on the above diet for over three weeks. Two tables. Five references (Two USSR)

Institution: Laboratory of Tissue Chemistry ( Head-Professor S. Ya. Kaplanskiy) Institute of Biological and Medical Chemistry, Acad Med Sci, USSR, Moscow

Submitted : --

KUZOVLEVA, O. D.

An electrophoretic study of proteins of the liver. K. Yu. Kaplanskii, O. B. Kuzovleva, and V. D. Uspenskaya (Inst

killed rats were perfused in situ, those of the dogs were dissected out and perfused for 3–5 min. with physiol saline. Livers were then cooled and homogenized. Other pro- of the exptl. procedures are described at

process of electrophoresis

strated. The

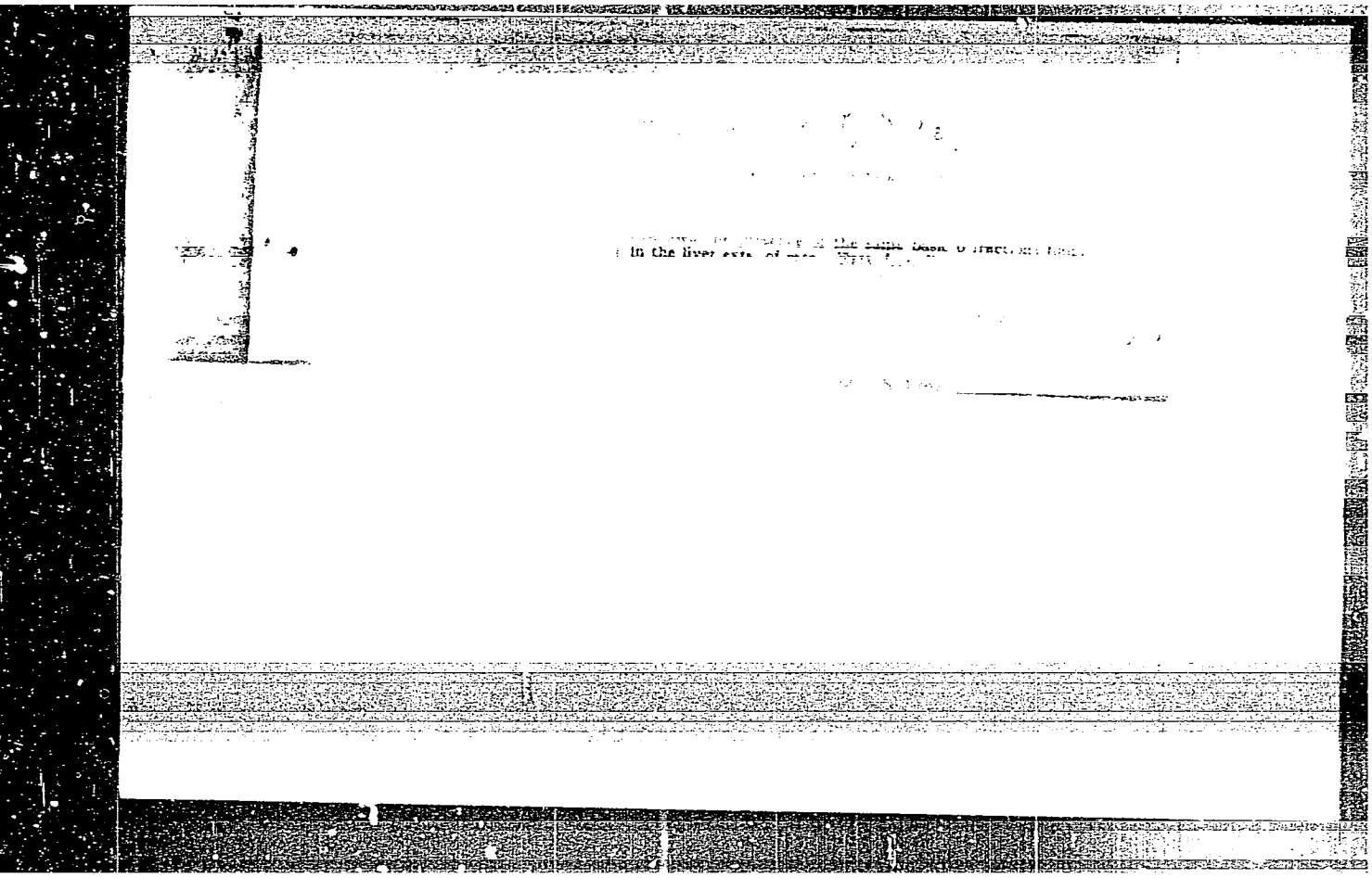
NaCl and the

moval from the

37° for 16 hrs. (first method) it is possible to obtain elec-

migration within the limits of α-globulin of blood serum. The extn. of the liver proteins with 2% NaCl and BuOH in 1:1 ratio (second method) revealed the presence of fraction 8, the migration rate of which was similar to that of α-globulin. Thirty to 35% of the proteins of the rat liver ext

1/2



KAPLANSKIY, S.Ya.; KUZOVLEVA, O.B.; STAROSEL'TSEVA, L.K.

Paper electrophoresis of liver proteins [with summary in English]. Vop.med.khim. 3 no.6:451-455 N-D '57. (MIRA 11:2)

1. Laboratoriya fiziologicheskoy khimii Instituta biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.
(LIVER, metabolism,
proteins, electrophoresis (Rus))
(PROTEINS, metabolism,
liver, electrophoresis (Rus))

KUZOVLEVA, O.B.

KAPLANSKIY, S.Ya.; KUZOVLEVA, O.B.

Electrophoretic investigation of liver proteins in protein deficiency and chloroform and carbon tetrachloride poisoning[with summary in English]. Biokhimiia 22 no.1/2:162-170 Ja-F '57. (MLRA 10:7)

1. Laboratoriya fiziologicheskoy khimii Instituta biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR, Moskva.

(PROTEINS, metabolism,
blood & liver in exper. protein insuff. & chloroform & carbon tetrachloride pois. (Rus))
(LIVER, metabolism,
proteins, in exper. protein insuff. & chloroform & carbon tetrachloride pois.(Rus))
(BLOOD PROTEINS,
eff. of exper. protein insuff. & chloroform & carbon tetrachloride pois. (Rus))
(CHLOROFORM, poisoning,
exper., eff. on blood & liver proteins (Rus))
(CARBON TETRACHLORIDE, poisoning,
same)

KUZOVLEVA, O.B.

Mutual conversion of proteins of the liver and the blood serum in rat liver homogenates. Biul.eksp.biol. i med. 45 no.6:62-65 Je '58 (MIRA 11:8)

1. Iz laboratorii fiziologicheskoy khimii (zav. - prof. S.Ya. Kaplanskiy) Instituta biologicheskoy i meditsinskoy khimii (dir. - deystvitel'nyy chlen AMN SSSR V.N. Orekhovich) AMN SSSR, Moskva. Predstvalena deystvitel'nym chlenom AMN SSSR V.N. Orekhovichem.

(BLOOD PROTEINS, metabolism,
interchage with liver proteins in rat homogenates (Rus))
(LIVER, metabolism,
proteins, interchange with blood proteins in rat liver homogenates (Rus))
(PROTEIN, metabolism,
liver, interchange with blood proteins in rat liver homogenates (Rus))

KUZOVLEVA, O.B.; VAN CHZHUN-YAN' [Wang Chung-yen]

Separation of proteolytic enzymes of rat liver extracts by paper and starch electrophoresis. Biokhimiia 24 no.3:550-555 My-Je '59. (MIRA 12:9)

1. Laboratory of Physiological Chemistry, Institute of Biological and Medical Chemistry, Academy of Medical Sciences of the U.S.S.R., Moscow.

(PROTEASES,
in liver extracts, paper & starch electrophoresis (Rus))
(LIVER EXTRACTS,
proteases, paper & starch electrophoresis (Rus))

KAPLANSKIY, S.Ya.; KUZOVLEVA, O.B.

Distribution of individual protein fractions between the structural elements of the cells of the liver and kidneys. Biokhimiia 26 no.4:603-607 Jl-Ag '61. (MIRA 15:6)

1. Laboratory of Pathology of Protein Metabolism and Immunology, Institute of Biological and Medical Chemistry, Academy of Medical Sciences of the USSR, Moscow.
(LIVER) (KIDNEYS) (PROTEINS)

GUREVICH, A.Ye.; KUZOVLEVA, O.B.; TUMANOVA, A.Ye.

Production of protein-cellulose complexes (immunosorbents) in suspensions with the capacity for binding large amounts of antibodies. Biokhimiia 26 no.5:934-942 S-O '61. (MIRA 14:12)

1. Laboratory of Pathology of Protein Metabolism and Immunochemistry, Institute of Biological and Medical Chemistry, Academy of Medical Sciences of the U.S.S.R., Moscow.
(SORBENTS) (ANTIGENS AND ANTIBODIES)

GURVICH, A.Ye.; KUZOVLEVA, O.B.; TUMANOVA, A.Ye.

Use of immunosorbents in the form of suspensions for determining the absolute antibody content. Biokhimiia 27 no.2:246-251 Mr-Ap '62. (MIRA 15:8)

1. Laboratory of Pathology of Protein Metabolism and Immunochemistry, Institute of Biological and Medical Chemistry, Academy of Medical Sciences of the U.S.S.R., Moscow.
(ANTIGENS AND ANTIBODIES) (IMMUNOCHEMISTRY)

PUDOVIK, A.N.; KUZOVLEVA, R.G.

Reactions of nucleiophilic reagents with vinylphosphinic and acetoxyvinylphosphinic acid esters. Zhur. ob. khim. 33 no.8:2755-2760 Ag '63. (MIRA 16:11)

1. Kazanskiy gosudarstvennyy universitet.

PUDOVIK, A.N.; KUZOVLEVA, R.G.

Polymerization and copolymerization of α- and β-carbalkoxy-vinyl phosphinates. Vysokom. soed. 7 no.9:1539-1542 S '65.
(MIRA 18:10)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

ACCESSION NR: AP4032576 S/0190/64/006/004/0737/0740

AUTHORS: Pudovik, A. N.; Kuzovleva, R. G.

TITLE: Polymerization and copolymerization of $\alpha$-acetoxyvinylphosphinic acid esters

SOURCE: Vy*sokomolek. soyedin., v. 6, no. 4, 1964, 737-740

TOPIC TAGS: alkyl vinylphosphinate, methyl vinylphosphinate, ethyl vinylphosphinate, propyl vinylphosphinate, alpha acetoxyvinylphosphinic acid ester, alkyl vinylphosphinate polymerization, alkyl vinylphosphinate copolymerization, methyl methacrylate, methyl acrylate, styrene

ABSTRACT: The polymerization of methyl, ethyl, and n-propyl esters of $\alpha$-acetoxyvinylphosphinic acid (AOVPA), and also the copolymerization of these esters with methyl methacrylate, methyl acrylate, and styrene were investigated. The rate of block polymerization was determined by the dilatometric technique, and the yield was estimated by removing the monomer by steam distillation. It was found that in the presence of 2 mole/% benzoyl peroxide the polymerization rate of AOVPA markedly increased with temperature. At 90C it reached 60% in 10 hours

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ACCESSION NR: AP4032576

(at 50C it took 40 hours to produce 50%). Experiments with various concentrations of benzoyl peroxide at 70C showed an enhancing effect of higher concentrations on the polymerization rate of AOVPA. A comparison of the polymerization rates of methyl, ethyl, and propyl esters of AOVPA revealed that the methyl ester had the lowest polymerization rate, and the propyl ester the highest. [Abstracter's note: the authors erred in claiming in the text and conclusions the reverse effect, as evidenced by Chart 27. The copolymerization of AOVPA with methyl methacrylate, methyl acrylate, and styrene was conducted in block, at 70C for a duration of 15 hours, in the presence of 1 mole/% benzoyl peroxide. The copolymers with a small content of AOVPA were hard, transparent products, while the ones containing a larger percentage of AOVPA represented viscous resins. The molecular weights of the copolymers were within the 4580-6616 range, and their vitrification temperature varied from 48C to 87.5C. Orig. art. has: 2 charts and 1 table.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University)

SUBMITTED: 01Jun63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: CH NO REF SOV: 005 OTHER: 004

Card 2/2

PUDOVIK, A.N.; KUZOVLEVA, R.G.

Reactions of diene synthesis involving esters of $\alpha$- and $\beta$-carbethoxyvinylphosphinic acid. Zhur. ob. khim. 34 no. 3: 1031-1032 Mr '64. (MIRA 17:6)

1. Kazanskiy gosudarstvennyy universitet.

L 1580-66 EWT(m)/EPF(c)/EWP(j)/T RPL WW/RM

ACCESSION NR: AP5022598 UR/0190/65/007/009/1539/1542
66.095.26+678.86

AUTHORS: Pudovik, A. N.; Kusovleva, R. G.

TITLE: Polymerization and copolymerization of α- and β-carbalkoxyvinyl phosphinates

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1539-1542

TOPIC TAGS: polymerization, copolymer, phosphinate, vinylphosphinate

ABSTRACT: Synthesis and polymerization of diethyl α- and β-carbalkoxyvinyl phosphinate (I and II, respectively) have been investigated as a continuation of the study of polymerization and copolymerization of various derivatives of vinylphosphinates reported earlier by the authors (Vysokomolek. soyed., 6, 737, 1964). The two methods for the preparation of I, reported in the literature by J. B. Dickey and H. W. Coover (U. S. Pat. 2559854, Chem. Abstr. 45, 8810, 1951) and A. Ya. Yakubovich, L. Z. Soborovskiy, L. I. Muler, and V. S. Fayermark (Zh. obshch. khimii, 28, 317, 1958) had to be disregarded, as the first one resulted in the wrong product, while the second gave an impure one. Treatment of the diethyl α-chloro-β-carbomethoxyethyl phosphinate (from the oxidative phosphorylation

Card 1/2

L 1580-66

ACCESSION NR: AP5022598

of methylacrylate) with twice the theoretical amount of triethylamine gave pure I, b.p. 110-112C/2 mm, $d_4^{20}$ 1.1687, $n_D^{20}$ 1.4389. II, b.p. 131-133C/4 mm, $d_4^{20}$ 1.1412, $n_D^{20}$ 1.4490 was obtained by using the method of K. M. Kirillova, V. A. Kukhtin, and T. M. Sudakova (Dokl. AN SSSR, 149, 316, 1963). Effects of the temperature, the nature, and the concentration of the initiator on the block polymerization of I and II were studied. It was found that I polymerized to the extent of 80% at 70C after 10 hours in the presence of 1 mole% of benzoyl peroxide. II gave a yield of only 15%. Increase of the temperature to 90C as well as the increase of the concentration of the initiator (azo-bis-isobutyronitrile) resulted in increased yield and polymerization rate. Copolymerization of I with methylmethacrylate, methylacrylate, and acrylonitrile gave solid polymers. II with methylmethacrylate gave a resinous, soft polymer. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan State University)

SUBMITTED: 12Oct64 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 001

Card 2/2

KUZOVNIKOV, A. A.

KUZOVNIKOV, A. A.: "Research on high-frequency discharge in the band from 1.5 to 15 megacycles". Moscow, 1955. Moscow State U imeni M. V. Lomonosov, Physics Faculty. (Dissertation for the Degree of Candidate of Physicomathematical Science)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

Kuzovnikov, A.A.

USSR/Electronics - Gas Discharge and Gas Discharge Instruments H-7

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12372

Author : Petrov, P.A., Kuzovnikov, A.A.
Inst : -
Title : The DC Component of Corona Discharge in a High Frequency Field.

Orig Pub : Vestn. Mosk. un-ta, 1956, No 6, 39-46

Abstract : Results are reported on an experimental study of high frequency field (1.5 and 5 Mc) between cylindrical coaxial electrodes. The internal electrode was a nichrome wire 0.2 mm in diameter. A noticeable dc current component, having the character of low-frequency pulses, was observed. The dependence of the dc component of the current on the high-frequency voltage was determined at various diameters of the external cylinder and for different orientation of the electrodes. The change in the orientation of the electrodes made it possible to study the influence

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USSR/Electronics - Gas Discharge and Gas Discharge Instruments H-7

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 12372

of the convection currents. The dependence of the dc component on the magnitude of the additional dc voltage applied to the electrodes was obtained. The value of the dc component of the current at the above frequencies exceeds the values obtained in the case of a commercial frequency. This is connected with the observed characteristics of the different lengths. It is noted that the dc component of the current is determined essentially by the number of negative particles, and that the process of corona formation in a high frequency field is connected with the presence of ions of low mobility. All the experiments were carried out in air at atmospheric pressure.

Bibliography, 6 titles.

Card 2/2

KUZOVNIKOV, A. A.

"The Conditions of Passage of Corona Discharge to Streamer Discharge and Atmospheric Pressure."

paper presented at Second All-Union Conference on Gaseous Electronics, Moscow, 2-6 Oct '58.

~~9(9)~~ 24.2120

AUTHOR: Kuzovnikov, A.A. SOV/155-58-4-31/34

TITLE: Investigation of High-Frequency Discharges in the Range of 1.5 - 15 mgHz. I (Issledovaniye vysokochastotnogo razryada v diapazone ot 1,5 do 15 mggts. I)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 4, pp 191 - 198 (USSR)

ABSTRACT: The paper contains a summary of experimental results obtained by himself and by other authors concerning high-frequency discharges in the range of 1.5 - 15 mgHz. It is stated that for smaller frequencies there takes place a corona discharge, and for high frequencies a torch discharge. Between them there lies a transition range. For low pressure there exists characteristic boundary between the domains of corona and torch for pressure, frequency and voltage. The magnitude and direction of the constant component of the discharge current depends on the frequency, pressure and voltage. For corona discharge under atmospheric pressure this component is essentially determined by the motion of the negative ions. Under increase of the voltage the corona discharge passes

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Investigation of High-Frequency Discharges in the Range of 1.5 - 15 mgHz. I SOV/155-58-4-31/34

through 3 different stages in its development ; they are to be described in the next article.
There are 9 figures, and 7 references, 3 of which are Soviet, 3 German, and 1 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: June 16, 1958

Card 2/2

24(3)

AUTHORS: Kuzovnikov, A.A., Kaptsov, N.A. SOV/155-58-5-27/37

TITLE: Discharge Power and the Character of the Discharge Current for Frequencies of 1.5 up to 9 mc

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 5, pp 158-166 (USSR)

ABSTRACT: With the aid of the experimental equipment described in [Ref 1] the discharge power as well as the magnitude and character of the discharge current were measured in the given frequency interval. The discharge arising in the air between a sphere and a plane under atmospheric or lower pressure was investigated. An approximative theory of the appearance is proposed. Among others it is stated : The power necessary for maintaining the discharge increases with increasing frequency of the external electric field. The transition from the corona discharge to the torch takes place under equality of the amplitudes of the active and reactive components of the electron current. An approximative investigation of the directed electron motion is possible, if it is based on the solution of the equation of motion of the averaged electron

Card 1/2

Kuzovnikov, A.A.

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24/2/20 SOV/109-4-8-22/35

AUTHORS: Granovskiy, V.L., Lukiyanov, S.Yu., Spivak, G.V. and Sirotenko, I.G.

TITLE: Report on the Second All-Union Conference on Gas Electronics

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 8, pp 1359 - 1358 (USSR)

I.M. Podgornyy and N.G. Koval'skiy - "New Data on X-ray Radiation During Pulse Discharges"

V.A. Ehrahrov and M.M. Sukhovskaya dealt with the investigation of the neutron radiation in powerful gas discharges in chambers with conducting walls.

M.A. Borgunov et al. - "Investigation of the Gas Discharge in a Conical Chamber".

S.M. Osovets et al. - "A Turn of Plasma in Transverse Magnetic Field".

I.G. Kesayev "Data on the Division of a Cathode Spot on Mercury in a Low-pressure Arc" (see p 1289 of the journal).

A.E. Robson (England) - "A New Theory of the Cathode Spot" (see p 1295 of the journal).

L.M. Biryukova - "Positive Column in a Hydrogen Discharge With Stationary and Pulse Loads".

I.G. Kikoshvili and A.A. Lobul - "Current Distribution on the Surface of Electrodes in Electric Pulse Discharges".

L.S. Kyz - "Some Properties of Gas Discharges in Low-voltage

Cards 1/3 in Halogen Counters".

G.I. Glotova and V.L. Granovskiy - "Comparison of the Initial De-ionization in the Isotopes of Hydrogen (H and D)".

L.A. Akopiyan communicated some results on the pre-breakdown current pulse at low pressures.

M.Ya. Vasil'yeva and A.A. Zaytsev - "Charge-density oscillation Wave in Cylindrical Plasma".

L. Vokrek of Czechoslovakia communicated some information on the wave-like phenomena in gas-discharge plasma.

B.G. Brezhner dealt with the problem of the determination of the energy of fast ions in pulse discharges.

B.B. Kadomtsev - "Convection Instability of a Plasma String".

F.F. Kraftmakh and V.D. Shafranov - "Theory of a High-temperature Plasma String".

The fifth section was presided over by N.A. Kaptsov and dealt with high-frequency currents in gases. The following papers were read:

V.Ye. Golant - "Formation of Ultra-high Frequency Pulse Discharges in Inert Gases".

G.I. Fateyuk - "Influence of the Boundary Conditions on the Formation and Maintenance of High-frequency Discharges".

P.S. Bulkin et al. - "Investigation of a Self-maintained Ultra-high Frequency Pulse Discharge and the Process of its Development".

G.M. Zastenker and G.S. Solntsev - "Some Results of the Investigation of the Formation of Low-pressure High-frequency Discharges".

O. Markman (USA) - "Conductivity of Weakly Ionized Plasma".

A.A. Kuzovnikov - "The Conditions of Transition From High-frequency Corona Discharge at Atmospheric Pressures".

V.Ye. Golant - "The relationship Between the Characteristics of the Ultra-high Frequency Current and the Direct Current in Gas Discharges".

B.B. Ingerlyer analysed the conductivity of the disintegrating plasma in the window of a resonance discharge tube.

S.M. Levitskiy and L.P. Shashurin dealt with the applicability of the probe method to high-frequency discharges (see p 1238 of the journal).

The paper by V. Ye. Mitsuk et al. was devoted to the investigation of the ultra-high frequency plasma by means of the Stark effect.

G.S. Solntsev et al. dealt with the problem of electric fields in a high-frequency discharge at low pressure.

Ye. Badaran of Rumania read a paper entitled "High-Frequency Discharges in Methane".

The work of the sixth section was devoted to the problems of plasma and its radiation; the section was presided over by V.A. Fabrikant. The following papers were read:

Yu.M. Kagan - "New Methods of Probe Methods of Plasma Investigation"

V.I. Drozdov - "Oscillographic Measurements in Plasma".

V.A. Simonov and A.G. Nilashkin - "Investigation of the Movement of Plasma by Means of a Mass Spectrometer of the Transit Time".

A.V. Rukhlinskiy - "Application of the Oscillations on a

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9,4175 (also 3002)

S/139/60/000/005/009/031
E073/E135

AUTHORS: Kuzovnikov, A.A., and Tsyan' Gao-Yun'

TITLE: Investigation of a High Frequency Discharge in the Range 1.5 to 15 Megacycles. II.

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No. 5, pp 55-59 (+ 2 plates)

TEXT: The results are described of oscillographic study of the photocurrent of a vacuum photocell illuminated by the radiation emitted from a discharge and from discontinuous current surges which occur in a high frequency corona discharge and a discharge of a transient shape dealt with in earlier work of one of the authors (Ref. 1). The results are given of observations carried out by means of a rotating disc, high-speed filming and a Kerr cell. The high frequency discharge was investigated at atmospheric pressure and at reduced pressure. It was found that during the first stage of the high frequency corona only one discharge channel exists at any one instant of time; its duration is between $10^{-4}$ and $10^{-7}$ sec. During the second stage of the corona the central channel of the discharge will exist throughout the time during which

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S/139/60/000/005/009/031
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Investigation of a High Frequency Discharge in the Range 1.5 to 15 Megacycles. II.

the discharge burns. During the second stage of the corona two types of lateral channels can be observed which differ in appearance and in duration of formation. One type is sharply limited in space and occurs during the time $\tau < 10^{-4}$ sec. The second type is somewhat blurred and the development is gradual during numerous voltage cycles. The lifetime of the lateral channels for both types is $10^{-4}$ - $10^{-3}$ sec at atmospheric pressure and about $10^{-2}$ sec at reduced pressures. Comparison of the oscillograms of the inductive current pulses and the pulses of the photocurrent indicates that there is a close relation between the redistribution of space charges and the radiation of a discharge. The individual impulses consist of a multitude of separate current surges which fuse together into a strong pulse. On reducing the pressure or increasing the frequency the number of pulses and their amplitude decreases. There are 6 figures, 1 table and 8 references: 6 Soviet, 1 English and 1 Japanese.

ASSOCIATION: Moskovskiy gosuniversitet imeni M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)

SUBMITTED: October 21, 1959

Card 2/2

26.2311
24.2120 (1049, 1160, 1482)

88045
S/139/60/000/006/009/032
E073/E335

AUTHORS: Kuzovnikov, A.A. and Kaptsov, N.A.

TITLE: Investigation of a High-frequency Discharge in the Range Between 1.5 and 15 Mc/s. III

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No. 6, pp. 64 - 70

TEXT: The mechanism of development of a high-frequency corona discharge and its change to a torch discharge cannot be studied solely on the basis of the theory of unbounded uniform plasma (Ref. 1). On the basis of experimental data, published earlier by the authors (Refs. 2, 6, 7), they suggest a mechanism of the development of such a discharge which is based on the conceptions of the avalanche-streamer theory. Application of the ideas of the avalanche-streamer theory to the high-frequency corona discharge at atmospheric and sub-atmospheric (300 - 400 mm Hg) pressures can be justified by the fact that both in the steady-state and in surge corona as well as in high-frequency corona individual localised discharge

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Investigation of a High-frequency Discharge in the Range Between 1.5 and 15 Mc/s. III

canals can be observed. The characteristics of the high-frequency corona (Ref. 2) are analogous to those of the steady-state (Refs. 3, 4) and surge (Ref. 5) corona discharges. In the earlier work of the authors (Refs. 2, 6, 7) it is shown that on increasing the voltage the high-frequency corona passes successively through the following three main stages (Ref. 2): 1) in the initial stage the discharge is in the form of fine channels which are distributed fanlike on the corona producing electrode; 2) in the second stage a bright central canal and numerous clearly visible side canals 3) in the third stage a high-frequency arc forms. The mechanism of development of a high-frequency corona discharge was investigated for the frequencies 1.5, 2, 3.7, 4, 6.5 and 8.7 Mc/s. The authors conclude that the mechanism of development of high-frequency corona discharges can be

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E073/E335

Investigation of a High-frequency Discharge in the Range Between 1.5 and 15 Mc/s. III

elucidated on the basis of the avalanche-streamer theory. In the initial stage of the corona and the torch discharge individual, short-length, rectilinear discharge canals form as a result of successive superposition on each other of electron avalanches and also as a result of development of an avalanche canal during oscillatory movement of the electrons under the effect of the high-frequency field. If the voltage amplitude increases to a certain value the formation of streamers in the corona discharge becomes possible. The discharge canals, which can be seen with the naked eye during this stage of the corona, are formed as a result of reforming of the streamer canal, as a result of secondary processes on the temporary cathode or as a result of oscillatory movement of the electrons under the effect of the high-frequency field. Under the given conditions streamer formations and consequently also the formation of individual visible canals of the high-frequency corona occur in the discharge at

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E073/E335

Investigation of a High-frequency Discharge in the Range Between 1.5 and 15 Mc/s. III

atmospheric pressure if the active duration of the half-cycle of the voltage is equal to or greater than 0.03 μsec. The torch discharge is a high-frequency plasma which is formed during numerous half-cycles of the high-frequency field and is drawn out upwards by the convection currents of the air. There are 1 table and 16 references: 11 Soviet and 5 non-Soviet.

ASSOCIATION: Moskovskiy gosuniversitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: October 21, 1959

Card 4/4

26.2721

20928

S/057/61/031/003/012/019
B125/B209

AUTHORS: Golovanivskiy, K. S. and Kuzovnikov, A. A.

TITLE: Pressure of an inhomogeneous electric h-f field upon the plasma in the positive column of a gas discharge

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 3, 1961, 343-347

TEXT: The present paper is a study of the effect of an inhomogeneous alternating electric field upon the plasma in the positive column of a low-pressure discharge. An inhomogeneous electric h-f field exerts a steady pressure upon the plasma, thus compressing it toward the discharge axis. The authors studied the most important qualitative fundamentals of this so far not investigated effect. Fig. 1 shows the experimental arrangement. A d-c creep discharge was excited in a 50-cm long cylindrical tube of 6 cm diameter. The experiments were made in argon and air at a pressure of $p = 3.7 \cdot 10^{-1}$ mm Hg. The current was kept at a constant voltage of 5 ma in both gases. The movable probe $3_1$ allowed to measure the plasma parameters at various distances from the tube axis. The stationary probe

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$3_2$ was used to control the results. Three electrodes were soldered to the discharge tube: a disk-shaped anode A, a disk cathode $K_2$, and a heater cathode $K_1$. The discharge was supplied from a high-voltage source $U_1$ across a variable resistor $R_1$. The h-f circuit of the arrangement consisted of a 100И (100I)-type generator, a broad-band amplifier (1), and a ВКС-7б (VKS-7b) cathode voltmeter. The inhomogeneous electric h-f field was generated by two copper rings КП, and the h-f voltage at the amplifier output was measured with a VKS-7b cathode voltmeter. When the h-f field was applied, the plasma which usually filled the entire volume of the discharge tube, contracted within the active zone of the rings contracted to the axis of the tube. The authors did not succeed in measuring the distribution of the electron density across the radius of the column in the compressed and in the uncompressed discharge. The degree of compression of the column as depending on various parameters was measured quantitatively by photographing and photometric evaluation of the gap between the rings. By this method, the authors determined the dependence of the pinch value on the amplitude of the h-f potential applied to the

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ring, and on frequency. The respective curves are plotted in Figs.4 and 5. In the case of a pinched column, the gas in the column was much brighter, and the discharge current rose somewhat. Fig. 6 illustrates the results of photometric evaluation for three different amplitudes of the h-f potential at a frequency of f = 100 kc/sec. This figure depicts the distribution of the luminescent intensity over the radius of the column as depending on the amplitude of the potential of the ring. The quantity S plotted on the ordinate is proportional to the logarithm of intensity; f = 100 kc/sec, discharge in air. $U_{\sim}(v)$: 1 - 115, 2 - 60, 3 - 0. Only an electric component of the electromagnetic alternating field can exert pressure upon the plasma. The force acting upon the electron gas per unit volume amounts to $\bar{F} = \frac{2n_e e^2}{m\omega^2} \nabla E^2$. e and m are the electron charge and mass, respectively, $\omega$ is the frequency of the field, and E is the amplitude of the electric field at a given point. A quasisteady electric field acts upon a plasma with the same pressure as a standing electromagnetic wave with amplitude E of the electric field. A standing electromagnetic wave

Pressure of an inhomogeneous... S/057/61/031/003/012/019
B125/B209

need not necessarily enter the system pinching the plasma. The raised ionization in the pinch may arise from two causes: a) rising number of ionizations due to acceleration of the electrons in a h-f field, b) accumulation of carriers in the pinched region since the latter loses the contact to the walls. The authors thank L. M. Khayurov for having assembled the experimental arrangement and for having made part of the measurements. There are 6 figures and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The two references to English language publications read as follows: H. Boot, S. Self, R.-S. Harvie, J.Electron.and Control, 4, no.5, 434, 1958; H. Boot, R.-S. Harvie, Nature, London, 180, 1187, 1957.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo universiteta (Division of Physics of Moscow University)

SUBMITTED: May 12, 1960

Card 4/8



26.2372

AUTHORS: Golovanivskiy, K. S., and Kuzovnikov, A. A.

S/057/61/031/007/021/021
B104/B206

TITLE: Pinch effect of the positive column of a gas discharge through a high-frequency, inhomogeneous electric field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 7, 1961, 890 - 892

TEXT: A cylindrical, positive column with ambipolar diffusion is studied under the assumption that all quantities are only functions of r. It is further assumed that the motion of charged particles of the type K in an inhomogeneous high-frequency field may be described by the potential $\Phi_k = e_k E^2/2m_k(\omega^2 + \nu_k^2)$ (1), and that $\Phi_k$ increases from the center to the periphery. The ion- and electron currents towards the wall are determined by the diffusion current, the discharge current in the electric field ($E_r$), and the current in the field of the potential (1).

$$\left.\begin{aligned} j_{ir} &= -eD_i\nabla n + eb_i nE_r - eb_i n\nabla\Phi_i, \\ j_{er} &= eD_e\nabla n + eb_e nE_r + eb_e n\nabla\Phi_e. \end{aligned}\right\} \quad (2)$$

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S/057/61/031/007/021/021
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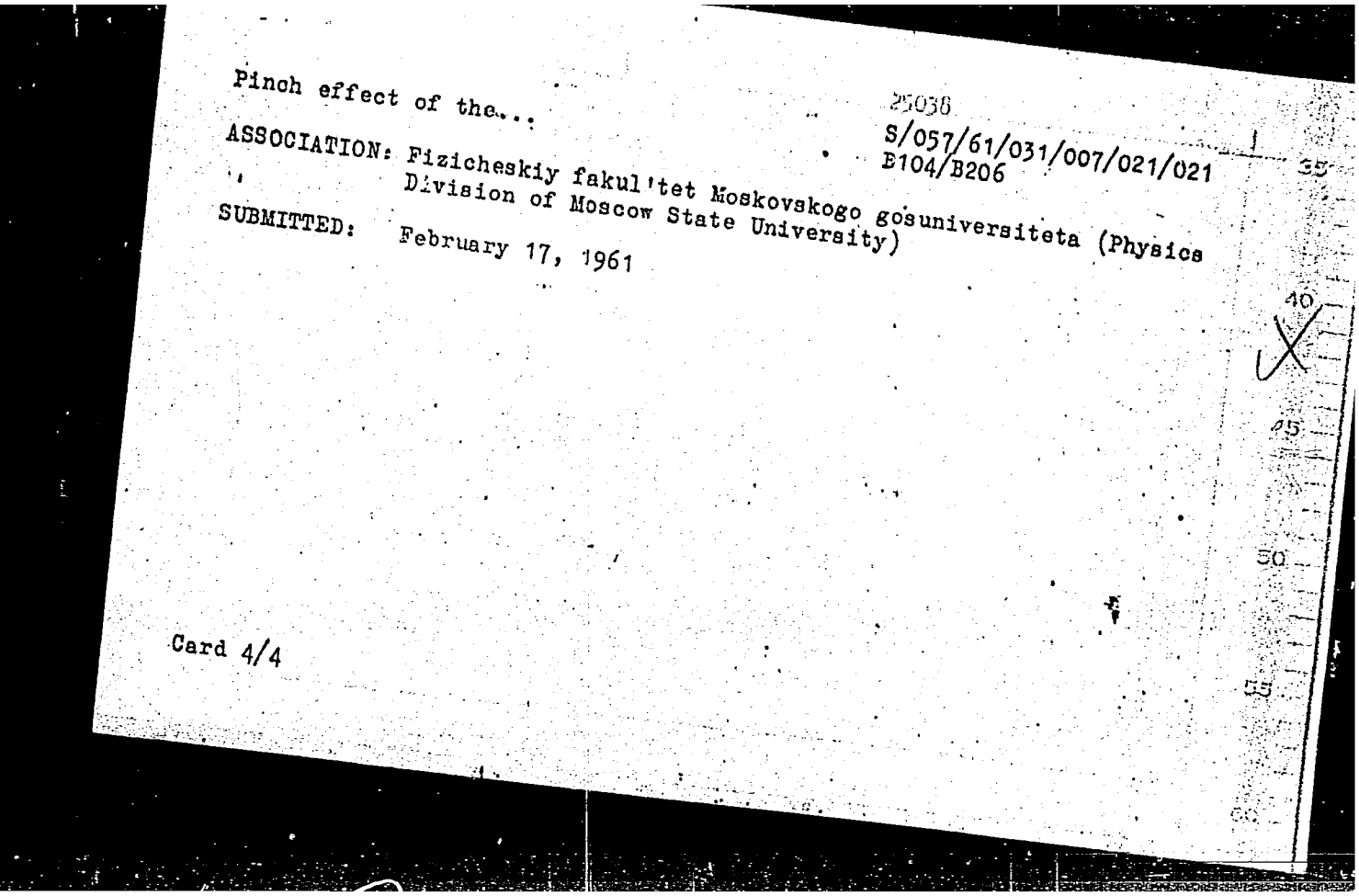
Thus, an additional radial field is produced, compensating the difference in the mobilities and the $\Phi_k$ values for ions and electrons. If the amplitude E of the high-frequency field is selected in such a way that on the wall the inequation

$$-\frac{\nabla n}{n} D_{am} = \frac{b_e b_i}{b_e + b_i} (\nabla \Phi_e + \nabla \Phi). \qquad (8)$$

is fulfilled, the charged particle current, towards the wall is stopped by the formation of a potential barrier of the form (1). A further increase of E reduces the radius of that zone in which (8) is fulfilled. This produces a contraction of the positive column. An estimation showed that for the constriction of the positive column to 1/3 in He with $n \sim 5 \cdot 10^8$ cm$^{-3}$, $T_e \sim 30{,}000^\circ$K and $r_0 = 3$ cm by an inhomogeneous field of a thin ring at a frequency of 1 megacycle and a capacitance of the ring with respect to the earth of C = 5 cm, a high-frequency voltage at the ring relative to the earth of 50 - 100 v is necessary. The authors thank V. Ye. Mitsuk for the valuable discussion. There are 3 Soviet-bloc references.



Pinch effect of the...

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S/057/61/031/007/021/021
B104/B206

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosuniversiteta (Physics Division of Moscow State University)

SUBMITTED: February 17, 1961

Card 4/4

GOLOVANIVSKIY, K. S.; KUZOVNIKOV, A. A.

Lower limit of a high-frequency quasi-potential in a positive plasma column. Izv. vys. ucheb. zav.; radiofiz. 5 no.5:933-944 '62. (MIRA 15:10)

1. Moskovskiy gosudarstvennyy universitet.

(Plasma(Ionized gases))

GOLOVANIVSKIY, K.S.; KUZOVNIKOV, A.A.

Lower frequency limit of the high-frequency quasi-potential in a helium or krypton plasma. Izv. vys. ucheb. zav.; radiofiz. 6 no.5:964-972 '63. (MIRA 16:12)

1. Moskovskiy gosudarstvennyy universitet.

ION CONCENTRATION OF POSITIVE PLASMA COLUMN IN HF FIELD (USSR)

Golovanivskiy, K. S., and A. Kuzovnikov. Radiotekhnika i elektronika, v. 8, no. 4, Apr 1963, 622-629. S/109/63/008/004/011/030

Ion concentrations at various points of a positive column of He plasma have been investigated experimentally, with emphasis on the dependence of the hf-potential effect on the frequency of ion collisions with neutral atoms. The tests were carried out in a molybdenum-glass discharge tube 700 mm long and 66 mm in diameter containing spectrally pure He at an initial pressure of about $10^{-6}$ mm Hg. The high-frequency field of 65 v and 1.3 Mc was found to move the plasma from high-field regions to low. The contracting action of the field, which occurs when the frequency of ion collisions with neutral atoms remains below the cyclic field frequency, is not dependent on pressure, provided other factors (ion concentration, hf voltage amplitude and frequency on the ring electrode) are constant. The increase of ion concentration leads to a weakening of the high-frequency effect because of the screening of the space charge. Under increasing pressure the field action can weaken or strengthen, depending on the relative preponderance of the pressure increase or the weakening of the screening effect. The concentration distribution in the axial direction was found to be asymmetrical relative to the plane of the ring electrode.

[FVP]

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L 9918-63 EWT(l)/BDS/EEC(b)-2/ES(w)-2--AFFTC/ASD/ESD-3/AFWL/
SSD--Pab-4/Pi-4/Po-4--IJP(C)
ACCESSION NR: AP3000009 S/0057/63/033/005/0555/0556

AUTHOR: Aleksandrov, A. F.; Kuzovnikov, A. A. 72 73

TITLE: Concerning the high-frequency conductivity of the plasma in the positive column of a gas discharge in neon 21

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 5, 1963, 555-556

TOPIC TAGS: high-frequency conductivity , plasma, positive column, Ne

ABSTRACT: The dependence of the conductivity in a Ne positive column on electron density was determined at 0.5 mm Hg and 28.5 megacycles. The measurements were undertaken to test the applicability to finite non-uniform plasmas of the theory given by Ginsburg, V. L. (Rasprostraneniye elektromagnitnykh voln v plasme, Fizmatgiz, 1960). The measurements were extended to electron densities up to 4x10sup9 per cc and the results are shown on a graph. The conductivities were measured by modification of the method of Szekely, A. (Ann.d.Phys. 20, 279, 1934), using pulse modulation of the high-frequency signal and an oscilloscope display. The plasma was contained

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ACCESSION NR: AP3000009

2

in a discharge tube 30 cm long with a 2-sq. cm central cross section. The electron densities and temperatures were measured by a probe at the axis of the tube. The reactive component of the plasma conductivity was neglected in reducing the data. The experimental conductivities agree well with the theoretical for electron densities up to about 1.3x10sup9 per cc; thereafter the experimental points drop below the theoretical line. The deviation from theory is ascribed to the effect of a variable space charge resulting from a concentration gradient in the direction of the applied field. This effect should appear only at electron concentrations exceeding a certain value that depends on the frequency of the applied field and on the electron collision frequency. Further investigation is necessary to test this explanation of the deviations. "The authors are grateful to Prof. N. A. Kaptsov for his attention and interest in the work." Orig. art. has: 1 equation and 1 figure.

ASSOCIATION: Fizicheskiy fakul'tet MGU (Physics Department, MGU)

SUBMITTED: 12Feb62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF SOV: 002 OTHER: 003

Card 1/2

ACCESSION NR: AP4020572

S/0057/64/034/003/0454/0457

AUTHOR: Golovanivskiy, K.S.; Dugar-Zhabon, V.D.; Kuzovnikov, A.A.

TITLE: Space potential in a stationary plasma under the influence of a nonuniform high frequency field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.3, 1964, 454-457

TOPIC TAGS: plasma, plasma diagnostics, plasma diffusion, ambipolar diffusion, high frequency field plasma

ABSTRACT: This paper is one of a series (K.S.Golovanivskiy and A.A.Kuzovnikov,ZhTF 31,No.3,343,1961; No.7,890,1961; Izv.Vuzov,Radiofizika,5,No.5,1962; No.5,1963; Radiotekhnika i elektronika,8,4,1963). In the earlier work it was shown that the charged particles in a plasma subjected to a nonuniform high frequency field experience a force directed opposite to the gradient of the amplitude of the high frequency field. Here it is deduced that if a positive column plasma be subjected to a high frequency field, the amplitude of which increases with distance from the axis, the plasma will be radially compressed and the radial potential distribution within the plasma will be altered by effects of ambipolar diffusion. Near the axis, where

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ACCESSION NR: AP4020572

the field is weak, the potential should be a linear function of the logarithm of the density, but at greater distances, a term proportional to the square of the high frequency field amplitude should make itself felt. A helium glow discharge at 0.31 mm Hg in a 6.6 cm diameter glass tube was subjected to a 1.3 megacycle field applied to a 2.8 cm wide brass ring circling the discharge tube. The ring electrode was pierced to admit a movable cylindrical probe, with which the radial distribution of density and potential was determined. The ion density was obtained from the ion portion of the probe characteristic, and the potential was measured with the aid of an auxiliary probe fixed in an undisturbed portion of the plasma. Radial density distribution curves obtained with and without the high frequency field showed a considerable compression of the plasma by the field. The potential distribution followed the log density distribution out to a radius of about 2.4 cm, after which large deviations occurred. These deviations were such as might be accounted for by the theoretical term proportional to the square of the high frequency field amplitude, but a quantitative comparison could not be made because the amplitude of the high frequency field was not accurately known. Orig.art.has: 4 formulas and 2 figures.

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ACCESSION NR: AP4020572

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M.V.Lomonosova fizicheskiy fakul'tet (Physics Department, Moscow State University)

SUBMITTED: 06Dec62

DATE ACQ: 31Mar64

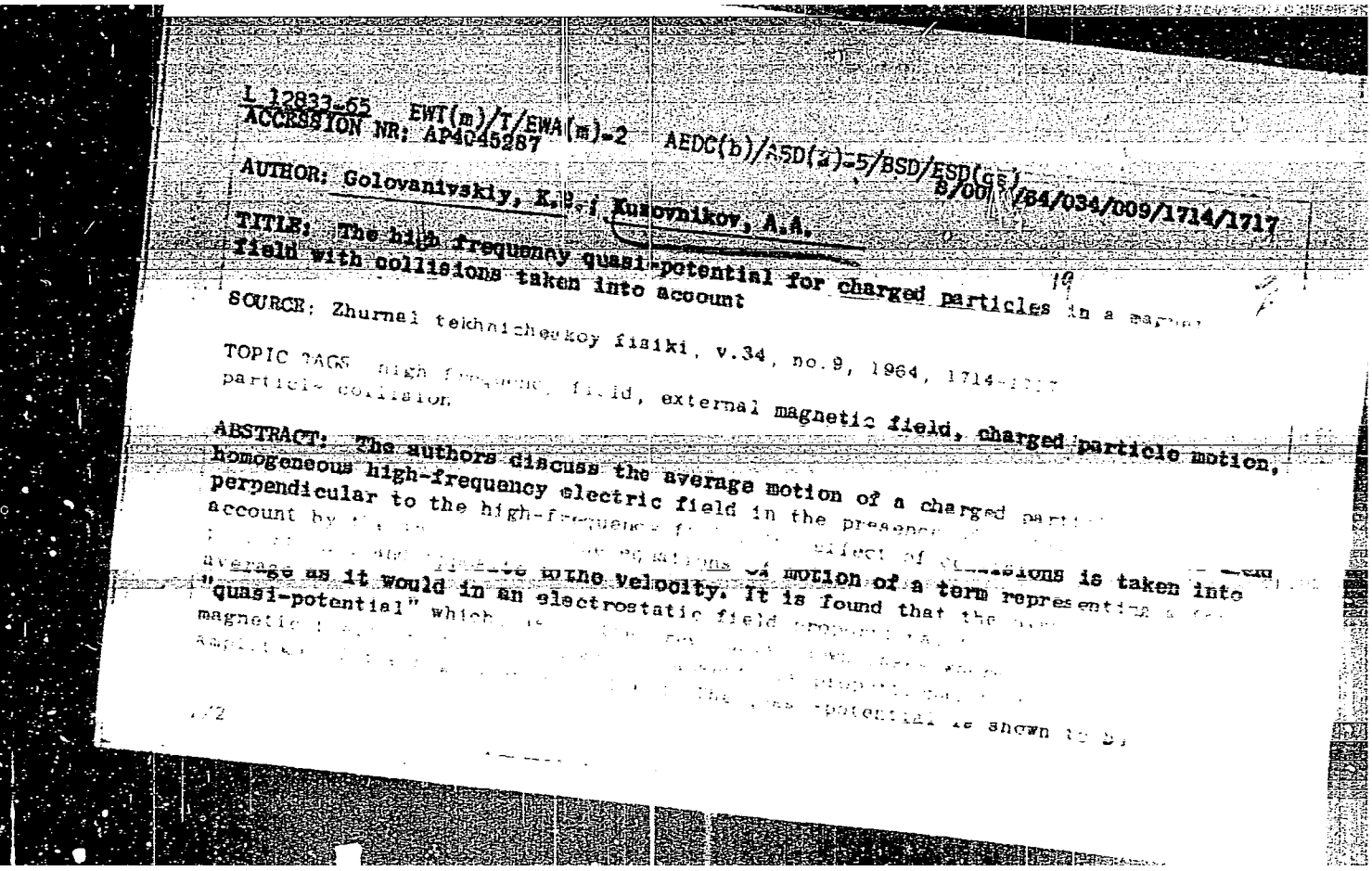
ENCL: 00

SUB CODE: PH

NR REF SOV: 006

OTHER: 000

Card 3/3



L 12833-65 EWT(m)/T/EWA(m)-2 AEDC(b)/ASD(a)-5/BSD/ESD(gs)
ACCESSION NR: AP4045287 S/0056/64/034/009/1714/1717

AUTHOR: Golovanivskiy, K.S.; Kuznetsov, A.A.

TITLE: The high frequency quasi-potential for charged particles in a magnetic field with collisions taken into account

SOURCE: Zhurnal teoreticheskoy fiziki, v.34, no.9, 1964, 1714-1717

TOPIC TAGS: high frequency field, external magnetic field, charged particle motion, particle collision

ABSTRACT: The authors discuss the average motion of a charged particle in a homogeneous high-frequency electric field in the presence of a magnetic field perpendicular to the high-frequency field. The effect of collisions is taken into account by introducing a term representing a force proportional to the velocity. It is found that the average motion of a charged particle is the same as it would in an electrostatic field [illegible] "quasi-potential" which [illegible] magnetic field [illegible] The [illegible] potential is shown to be

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L 12833-65

ACCESSION NR: AP4045287

$$\Phi = \frac{e(\ldots)}{4\ldots} \frac{\omega^2 + \nu^2 - \omega_c^2}{\ldots}$$

where [illegible] of the high frequency field, $\omega_c$ is the [illegible] of the particle. This expression for the quasi-potential reduces to previously known expressions in the cases when $\omega_c$, $\nu$ or both vanish. It may be noted that the particle tends to move toward a region of maximum high-frequency field amplitude when the static magnetic field is sufficiently large, and away from such a maximum amplitude region when the magnetic field is small. Orig.art.has: 25 formulas.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo universiteta (Physics Department, Moscow State University)

SUBMITTED: [illegible]

SUB CODE: EM,MR

NR REF SOV: 004

ENCL: 00

OTHER: 001

2/2

PAKHALUYEV, K.M.; KUZOVNIKOV, A.A.; NOVIK, G.P.; BORODIN, V.P.; SOBOLEV, A.A.; ZUBKOVA, N.M.

Industrial operation of holding furnaces fired by natural gas for direct low-oxidation heating. Stal' 25 no.10:957-961 O '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i zavod "Krasnyy Oktyabr'".

GORYAGA, G.I.; KUZOVNIKOV, A.A.; RUBAN, A.A.; YARAMYSHEV, G.S.

Stabilization of a brush discharge. Vest. Mosk. un. Ser. 3: Fiz., astron. 20 no.6:80-82 N-D '65. (MIRA 19:1)

1. Kafedra molekulyarnoy fiziki i kafedra elektroniki Moskovskogo gosudarstvennogo universiteta. Submitted Feb. 3, 1965.

L 38900-66 EWT(1)

ACC NR: AP6029724 SOURCE CODE: UR/0109/66/011/005/0966/0967

AUTHOR: Zernov, D. V.; Timofeyev, P. V.; Fursov, V. S.; Migulin, V. V.; Spivak, G. V.; Spasskiy, B. I.; Nilender, R. A.; Grozdover, S. D.; Shemayev, A. M.; Solntsev, G. S.; Kuzovnikov, A. A.; Zaytsev, A. A.; Vasil'yeva, M. Ya.; Mitsuk, V. Ye.; Dubinina, Ye. M.; Zheludeva, G. A.

ORG: none

TITLE: Nikolay Aleksandrovich Kaptsov

SOURCE: Radiotekhnika i elektronika, v. 11, no. 5, 1966, 966-967

TOPIC TAGS: electric engineering personnel, magnetron, klystron, corona discharge, gas conduction, gas discharge plasma

ABSTRACT: N. A. Kaptsov passed away 10 February 1966. He was a student of the famous P. N. Lebedev, and performed many fundamental investigations in the development of modern electronics. He was the creator and leader of the chair of electronics of Moscow State University. He developed the concept of phase grouping of electrons. His ideas are the basis for the development of the magnetron and klystron. He developed the concept explaining the phenomenon of corona discharge. He also developed ideas connected with formation of gas conduction and phenomena in a gaseous-discharge plasma. Kaptsov served for years as the head of the physical laboratory and consultant to the Moscow Electron Tube Plant. He was the author of numerous books, including "Physical Phenomena in Vacuum and in Gases, which was translated into foreign languages; he also created and taught numerous electronics courses. [JPRS: 36,501]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1 mlp

0918 0203

8(6)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 22 (USSR) SOV/112-59-3-4439

AUTHOR: Kuzovnikova, Ye. A., Leonkov, A. M., and Stepanchuk, V. F.

TITLE: Prospects for Power Generation in the BelSSR From Peat Sources (Perspektivy razvitiya energetiki BSSR na baze torfyanykh mestorozhdeniy)

PERIODICAL: Sb. nauchn. rabot Belorussk. politekhn. in-t, 1957, Nr 61, pp 140-153

ABSTRACT: Peat reserves in the BelSSR amount to 5 billion tons. 2.2 million hectars have been prospected and 5,945 peat bogs have been found, of which 1,508 can be commercially developed. These bogs occupy an area of over 100 hectars (93.3% of the reserves). Ash content of top beds is 2-4%, of lower beds 6-15%. Heat of combustion of the dug peat is 2,100-2,500 kilocal/kg. The annual yield of the peat is evaluated at 50 million tons for the next 50 years. Five groups of the largest peat massifs in the BelSSR which can serve as raw-energy sources for large-size power stations are: (1) the Vasilevichi group

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8(6)

Prospects for Power Generation in the BelSSR From Peat Sources SOV/112-59-3-4439

with an equivalent capacity of the massif of 400,000 kw; it is considered expedient to build one large power plant for Gomel', Bobruysk, Zhlobin, and other cities; (2) the Berezina group whose equivalent capacity is 700,000 kw; either one 700,000-kw or two 450,000-kw and 250,000-kw power plants are considered for Volkovyssk, Brest, and other cities; (3) the Sergiyevsk group with a total capacity of 275,000 kw; one power plant is being planned for using peat for both production of electric energy and gas and transmitting them to Minsk; (4) the David-Gorodok group; and (5) the Naroch' group with an equivalent capacity of 500,000 kw. One of the plans under consideration is to build 2 power houses of 250,000 kw each for Polotsk and Molodechno. The aggregate capacity of large electric power stations that could be built on the peat-energy sources in the BelSSR is about 2,600,000 kw.

A.B.M.

Card 2/2

8 (6)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, pp 31-32 (USSR) SOV/112-59-1-245

AUTHOR: Kuzovnikova, Ye. A.

TITLE: On Determining Heat Losses From Mechanically Incomplete Combustion

PERIODICAL: Sb. nauchn. rabot. Belorussk. politekhn. in-t, 1957, Nr 61, pp 154-161

ABSTRACT: In using the atmospheric air as an oxidizer, the dimensionless coefficient $\beta$ that depends only on the composition of fuel acquires importance. This coefficient is called the "fuel characteristic." The true value of $\beta$ depends not on the total quantity of carbon in the fuel but only on that part of it which participates in combustion and gas formation.

$$\beta = 2.37 \frac{H - \frac{O}{8} + \frac{N}{25.6}}{C - C_{mn} + 0.375\,S}$$

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On Determining Heat Losses From Mechanically Incomplete Combustion SOV/112-59-1-245

The formula shows that the accuracy of determination of $\beta$ depends on the accuracy of determination of the mechanically incomplete combustion $C_{mn}$. The $C_{mn}$ can be determined from gas-analysis data (as was suggested by Professor G. F. Knorre in 1928). Later on, Professor V. A. Koryakin suggested his equation for determining $C_{mn}$; the coefficient $\beta$ calculated from the fuel composition is also used there. A formula is presented for determining $C_{mn}$ on the basis of a gas analysis, without chemical investigation of the fuel composition.

S.M.Sh.

Card 2/2

KUZOVNIKOVA, Ye.A., kand. tekhn. nauk, dotsent

Basic problems in the automation of thermal processes in electric power plants. Izv. vys. ucheb. zav.; energ. no. 1:132-136 Ja '58. (MIRA 11:7)

(Automation)
(Electric power plants)

KUZOVNIKOVA, Ye.A.

RUTSKIY, A.I.; LEONKOV, A.M.; GEYLER, L.B.; SLEPYAN, Ya.Yu.; MOSKVIN, I.V.; SOBOLEV, A.I.; TINYAKOV, N.A.; VOIKOV, N.P.; BOTVINNIK, Ya.Ye.; BARABANOV, M.Ye.; BRAZGOVKA, V.A.; PEKELIS, G.B.; KUZOVNIKOVA, Ye.A.; KUZ'MIN, Yu.P.; SHIMKO, N.I.; PALLADIY, N.L.; KHUTSKIY, G.I.

G.I. Dobkin; obituary. Izv. vys. ucheb. zav.; energ. no.4:128 Ap '58. (Dobkin, Grigorii Izrailevich, 1892-1958) (MIRA 11:6)