

PETROV, V.F., general-mayor meditsinskoy sluzhby

Some errors in the selection of patients for sanatorium-health resort treatment. Voen.-med. zhur. no. 6:43-45 Je '60.

(SANATORIUMS)

(MIRA 13:7)

PETROV, V G.

The addition of halogen acids to pseudobutylene. V. G. Petrov and A. D. Milovanova. *Izv. Akad. Nauk SSSR Ser. Khim.* 1967, No. 3, 146-51 in German. Chlorobutane is best prepd. by heating pseudobutylene with an equiv. amt of HCl, d. 1.19, in a sealed tube at 120° for 3-4 hrs. The yield is 78-84%. It can also be prepd. in 70% yield by passing equiv. amts. of the gases at 100-200° over SnCl₄ or SnCl₄ deposited on porous. When HBr or HI is passed into the detm. at 120°, 1,2-dibromo- and 2-iodobutane are formed. H. M. L. (C) (C)

CA
PETROV, V G.

CONDENSATION OF N-HALOAMIDES WITH ALIPHATIC THIO ETHERS

ethers J. V. G. Petrov *J. Gen. Chem. (U.S.S.R.)* 9, 1035-41 (1939). - Chloramine B and chloramine T condense with aliphatic thio ethers, forming the corresponding sulfinimines. The reaction takes place in both aq. and nonaq. media. The sulfinimines are cryst. materials. Their constitution was detd. through hydrolysis and through detn. of S and N. Attempts to condense (iso-Pr)₂S (I) and Bu₂S with AcNHCl resulted in the formation of sulfoxides and AcNH₂HCl. Diisopropylsulfenbenzenesulfonylimine, (iso-Pr)₂S-NSO₂Ph (II), m. 98°, was prepd. by dissolving 5.8 g I in 15 cc acetone and slowly adding to it 13.5 g chloramine B in 50 cc acetone. After a few minutes refluxing the mixt. was filtered and the filtrate was evapd. *in vacuo* at room temp. to a small vol., upon cooling to -20° it yielded crystals which were recrystd. from benzene. Dibutylsulfenbenzenesulfonylimine was prepd. from Bu₂S (5.7 g) in a similar fashion. Recrystd. from CHCl₃ at -20°, it m. 65.2°, yield 4.2 g. Diisobutylsulfenbenzenesulfonylimine (III), prepd. in a similar manner with (iso-Am)₂S (IV), m. 87.8°. I and IV were treated with chloramine T in acetone, CHCl₃ and aq. alk., the resulting p-Me derivs. of II and III m. 102.3° and 112°, resp.
David Aclony

Kabardino-Burkav State Pedagogic Inst., Nal' chik

ADD 51A METALLURGICAL LITERATURE CLASSIFICATION

PETROV, V. G.

USSR/Metals - Steel, Casting

Feb 51

"Manufacture of Steel Castings by the Investment Molding Method," V. G. Petrov, O. V. Stupishina, Engineers, Mkhavtotraktoroprom NZTA

"Litsey Proiz" No 2, p 12

Expts conducted to establish conditions for obtaining satisfactory castings of carbon steel. Number of nonmetallic and gaseous inclusions is decreased with increasing C-content in steel. Decarburization of surface layer not thicker than 0.10 mm is possible only in case of using steel 55 and when wall thickness of casting does not exceed 10-12 mm.

USSR/Metals - Steel, Casting (Contd)

Feb 51

Steel with 55% C shows best mech properties (except elongation), which make possible use of this steel in normalized state, omitting operations of hardening and tempering.

185T94

PETROV, V.G.

From practices of the Stalingrad tractor plant. Lit. proizv.
no.8:27-29 Ag'55. (MLRA 8:11)
(Stalingrad--Tractor industry)

PETROV, V.G., inzhener.

Electric contact surfacing of castings. Lit.proizv. no.4:13 Ap '56.
(Metals--Finishing) (Steel castings) (MLRA 9:7)

MATAKISIS, T. [Mataxis, T.], polkovnik; GOLDBERG, S., podpolkovnik;
ALEKSANDROV, I.A. [translator]; GROMOV, Yu.Ye. [translator];
PETROV, V.G. [translator]; TSYGICHKO, N.P., red.; NEPODAYEV,
Yu.A., red.; IOVLEVA, N.A., tekhn.red.

[Pentomic Divison; tactics, armaments and firepower of the pentomic
division, battle groups and companies operating under conditions
of atomic warfare] Pentomicheskaja diviziia; taktika, vooruzhenie
i ognevaia moshch' pentomicheskoi divizii, boevoi gruppy i rot'y v
usloviakh primeneniia iadernogo oruzhiia. Pod red. N.P.TSygichko.
Moskva, Izd-vo inostr.lit-ry, 1959. 345 p. Translated from the
English.

(United States--Army)

(Atomic warfare)

(MIRA 13:6)

PETROV, V. G.

"Development of Babesiosis Stimulus in Ixodes Ticks."
Thesis for degree of Cand. Biological Sci. Sub. 2.
Apr 49, Moscow Veterinary Academy.

Summary 52, 13 Dec 52, Disertations Presented
For Degrees in Science and Engineering in Moscow in
1947. From Veshernyaya Moskva, Jan-Dec 1947.

PETROV. V. G.

OLSUP'YEV, N.G.; PETROV, V.G.; YAMOLOVA, N.S.; MIKHALEVA, V.A.; SAMSONOVA,
A.P.; KHLIUSTOVA, A.I.

Role of the tick *Dermacentor marginatus* Sulz. in sustaining tularemia
infection in a natural nidus of the bottomland type. Zool.zhur. 33 no.2:
290-295 Mr-Apr '54. (MLRA 7:5)

1. Otdel parazitologii i meditsinskoy zoologii (zaveduyushchiy - akademik
Ye.N.Pavlovskiy) IEM Akademii meditsinskikh nauk SSSR im. N.F.Gamaleya,
Stalingradskaya protivoepidemicheskaya stantsiya Ministerstva zdravookhra-
neniya SSSR i Stalingradskaya protivotulyaremynaya stantsiya.
(Tularemia) (Ticks as carriers of disease)

PETROV, V.G.

USSR/Medicine - Tularemia, Epidemiology

FD-2594

Card 1/1 Pub. 148 - 5/25

Author : Olsuf'yev, N. G.; Kucheruk, V. V.; *Makarov, N. I.; *Borodin, V. P.;
 Petrov, V. G.; and Selyanin, Ye. P.

Title : The structure of a natural reservoir of river valley type tularemia

Periodical : Zhur. mikro. epid. i immun. 4, 27-31, Apr 1955

Abstract : The results of a three year study of the ecological relationships
 between the rodents and insects which act as hosts and vectors of
 Pasteurella tularensis in an unnamed river valley in the USSR are
 given. Epizootic and epidemiological data reveal the connections
 between the yearly flooding of the valley and outbreaks of tula-
 remia among its animal and human inhabitants. Mosquitoes, gnats,
 and horse-flies act as mechanical vectors. The ticks, Dermacentor
 marginatus and Rhipicephalus rossicus, maintain the infection dur-
 ing the interepidemic period and constantly transmit it to the
 water rats, Arvicola terrestris, and other mouse-like rodents.
 The names of the 12 scientists who carried out the study are
 listed. No references are cited.

Institution : Institute of Epidemiology and Microbiology imeni Gamaleya (Director -
 G. V. Vygodchikov); Stalingrad Sanitary-Epidemiological Station
 (*Head - Cand Med Sci N. I. Makarov); Stalingradskaya Oblast
 Anti-Tularemia Station (*Head Physician - V. P. Borodin)

Submitted : December 31, 1954

PETROV, V.G., KUCHERUK, V.V., DUNAYEVA, T.N., PSHENICHNAYA, L.A., MEDVEDEVA, M.S.,
and GLUSHKO, N.V.

"Peculiarities of the Existence of Natural Nidi of Tularemia in Shelter-belt
Zones and the Means of Improving Health Conditions in These Nidi", Problems of
Regional, General and Experimental Parasitology and Medical Zoology, Vol. 9, 1955.

Division of Parasitology and Medical Zoology, Inst, Epidemiology and Microbiology
imeni N. F. Gamleys, AMA USSR

Sum. I305

PEYROV, V.G., and DUNAYEVA, T.N.

"The Dependence in Animal -- Donors of the Ixodes Tick's Infection to the Peculiarities of the Course of Tularemia", Problems of Regional, General and Experimental Parasitology and Medical Zoology, Vol, 9, 1955.

Division of Parasitology and Medical Zoology, Inst, Epidemiology and Microbiology
Imeni N. F. Gamleya, AMA USSR

Sum. I305

1. PETROV, V.G.
OLSUP'YEV, N.G.; PETROV, V.G.; YAMOLOVA, N.S.; MIKHALEVA, V.A.; SAMSONOVA, A.P.;
KHLIUSTOVA, A.I.

Role of the ticks *Rhipicephalus rossicus* Jakim. et K.-Jakim. in
sustaining tularemia in a natural focus of the flood plains.
Zool.zhur. 34 no.61224-1228 N-D '55. (MLRA 9:1)

1. Otdel parazitologii i meditsinskoy zoologii (zav. akad. Ye. N. Pavlovskiy),
IEM Akademii meditsinskikh nauk SSSR imeni N. F. Gamaleya, Stalingradskaya
protivoepidemicheskaya stantsiya Ministerstva zdravookhraneniya SSSR i
Stalingradskaya protivotulyaremiynaya stantsiya.

(Tularemia) (Ticks as carriers of disease)

PETROV, V. G., OLSUF'YEV, N. G., KUCHERUK, V. V., BORODIN, V. P., MAKAROV, N. I., and
SELYANIN, YE. P.

"Concerning the Structure of Natural Foci of Tularemia of the
Riverbottom Type." Proceedings of Inst. Epidem and Microbiol im.
Gamaleya 1954-56.

Division of Parasitology and Medical Zoology, Pavlovskiy, Yevgeniy
Nikanorovich. Active Member of Academy of Medical Sciences USSR. head.
Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

PETREVA, V. S.

"The results of the study on the role of ticks as *L. infantum* carriers."
p. 192.

Deputy Chief of the Institute of Parasitology and Entomology, Academy of Sciences of the USSR, Moscow. 22-29 October 1977. (Joint Conference on Parasitology and Problems and Diseases of the National Pool 22-29 October 1977), Moscow-Leningrad, 195, Academy of Medical Sciences USSR and Academy of Sciences USSR, Vol. 1, 254pp.

Inst. of Epidemiology and Microbiology, AMS USSR/Moscow

OLSUF'YEV, N.G.; PETROV, V.G.

Discovery of the tick *Haemaphysalis concinna* Koch. naturally
infected with tularemia microbes. Trudy Inst.zool.AN
Kazakh.SSR 12:54-56 '60. (MIRA 13:7)
(Staraya Barda District--Tularemia)
(Ticks as carriers of disease)

PETROV, V.G.

Transovarian transmission of the tularemia pathogen in Dermacentor marginatus Sulz ticks. Med.paraz.i paraz.bol. no.1:62-66 '62.

(MIRA 15:5)

1. Iz laboratorii tulyaremii otdela infektsiy s prirodnoy ochagovost'yu (zav. - prof. P.A. Petrishcheva) Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR.

(TICKS AS CARRIERS OF DISEASE) (PASTEURELLA TULARENSIS)

OLSUF'YEV, N.G.; KUCHERUK, V.V.; BORODIN, V.P.; PETROV, V.G.; UGLOVOY, G.P.;
KULIK, I.L.; NIKITINA, N.A.; SAMSONOVA, A.P.; YERMOLOVA, A.I.; SPITSEYN,
N.A.

Changes in the conditions of existence of the natural tularemia focus
in the northern part of the Volga-Akhtuba flood plain area in connection
with the construction of the Volgograd Hydroelectric Power Station.
Zhur. mikrobiol., epid. i immun. 40 no.11:127-132 N '63.

(MIRA 17:12)
1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR
i Volgogradskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

PETROV, V.G.

Role of the mite *Hirstionyssus musculi* Johnst. in the
transmission and preservation of tularemia infection. Zool.
zhur. 42 no.7:1031-1040 '63. (MIRA 17:2)

1. Laboratory of Tularemia, Department of Infections of Natural
Nidality, Institute of Epidemiology and Microbiology, Academy
of Medical Sciences of the U.S.S.R., Moscow.

DUNAYEVA, T.N.; PETROV, V.G.; KULIK, I.L.; NIKITINA, N.A.; UGLOVOY, G.P.

Natural foci of tularemia on the territory of the Komi A.S.S.R. Biul.
MOIP. Otd. biol. 69 no.1:23-40 Ja-F '64. (MIRA 17:4)

UGLOVOY, G.P.; ANDRONNIKOV, V.A.; KULIK, I.L.; PETKOV, V.G.; BEBESHKO, S.V.;
DUNAYEVA, T.N.; STYAZHKOVA, F.S.

Experience in detecting natural foci of tularemia on the territory
of the Chuvash A.S.S.R. Zhur.mikrobiol., epid. i immun. 42 no.4:21-
25 Ap '65. (MIRA 18:5)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR
i Respublikanskaya sanitarno-epidemiologicheskaya stantsiya
Chuvashskoy ASSR.

ACC NR: AP7001157 (A,N) SOURCE CODE: UR/0439/66/045/006/0936/0937

AUTHOR: Petrov, V. G.

ORG: Tularemia Laboratory, Department of Infections with Natural Foci, Institute of Epidemiology and Microbiology, Academy of Medical Sciences, SSSR, Moscow (Laboratoriya tulyaremii ot dela infektsiy s prirodnoy ochagovost'yu Instituta epidemiologii i mikrobiologii Akademii meditsinskikh nauk SSSR)

TITLE: A method of artificial breeding of gamasid ticks (*Hirstionyssus muscylus* Johnst.)

SOURCE: Zoologicheskii zhurnal, v. 45, no. 6, 1966, 936-937

TOPIC TAGS: parasitology, animal parasite, disease vector, tick,
BIOLOGIC REPRODUCTION

ABSTRACT: A method for breeding *Hirstionyssus muscylus* ticks under laboratory conditions is described. The artificial breeder, shown in Fig. 1, approximates conditions in a natural rodent nest. Ticks multiplied most rapidly in the summer,

Card 1/2

UDC:595.422:591.16.08

ACC NR. AP7001157

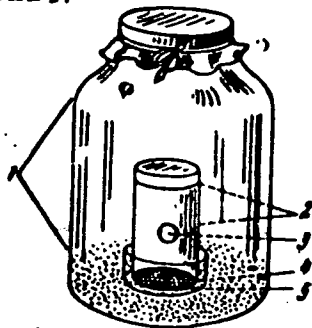


Fig. 1. Breeder for *Hirstionyssus musouli* ticks

- 1 - Glass jar; 2 - nest compartment; 3 - hole for entrance of mouse; 4 - gypsum bottom; 5 - dish with wet sawdust.

when the host mouse littered. A vessel for storing the ticks is shown in Fig. 2. Uninfected ticks were kept at 4-6C in such vessels as long as 212 days.

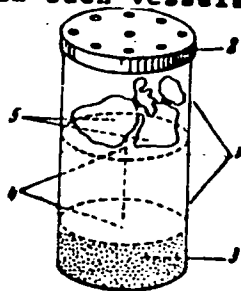


Fig. 2. Cylinder for storing *Hirstionyssus musouli* ticks

- 1 - Cylinder body; 2 - cover; 3 - wet sawdust; 4 - support for sacks; 5 - cloth sacks for ticks.
- Orig. art. has: 2 figures

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 002 [WA-50; CBE No. 14]
 Card 2/2 [JS]

L 7955-66 EWT(1)/EWA(h)

ACC NR: AP5025748

SOURCE CODE: UR/0286/65/000/018/0095/0095

AUTHORS: Zakharenko, A. S.; Baranov, B. M.; Petrov, V. G.

ORG: none

35
B

TITLE: Phase sensitive amplifier, Class 42, No. 174359 [announced by State Committee for Radio Electronics, SSSR (Organizatsiya gosudarstvennogo komiteta po radioelektronike SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 95

TOPIC TAGS: transistorized amplifier, solid state amplifier

ABSTRACT: This Author Certificate presents a phase-sensitive ac amplifier made of semiconductor elements with negative feedback according to the quadrature component for slave systems with reactive detectors. To decrease the rise time and power requirement, a linear bridge of four stabilitrons is connected in the amplifier feedback circuit. The end of the bridge diagonal, which is connected to the junction of the stabilitron cathodes, is connected through a resistor and capacitor to ground. The other end, which is connected to the junctions of the

Card 1/2

UDC: 681.14
2

L 7955-66

ACC NR: AP5025748

stabilatron anodes, is connected through a resistor to the amplifier power supply to obtain a constant reference bias current and to the base of the amplifier stage. The other diagonal is connected at one end to the phase-sensitive rectifier of the quadrature component of the amplifier output signal to unbalance the bridge according to the variable current. The other end is connected to the signal source of the variable current in phase with the quadrature component.

SUB COLL: EC/ SUBM DATE: 23Jul64

OC
Card 2/2

CHEKHA, I.I., as.istent; IETROV, V.G., student

Surgical method for treating balanoposthitis in bulls. Veterinarika
42 no.7:82-83 J1 1965. (MIRA 18:9)

1. Omskly veterinarnyy institut.

197101, v.11.

Time of the finding: 1971.01.15. Location: 5 km north of the
northern part of the Yermak Range. (Lat. 77°01' N, Long.
104°00' W). (MIA 1210)

1. Apparatus: magnetometer, compass.

L 58869-65 EWA(b)-2/EWA(j)/EWT(1)/T JK
ACCESSION NR: AP5011272

UR/0016/65/000/001/0021/0025

AUTHOR: Uglovoy, G. P.; Andronnikov, V. A.; Kulik, I. L.;
Petrov, V. G.; Bebesko, S. V.; Dunayeva, T. N.; Styazhkova, F. S.

263
23
B

TITLE: Experience in detecting tularemia natural foci in Chuvash ASSR territory

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 4, 1965, 21-25

TOPIC TAGS: tularemia, epidemiology, Chuvash ASSR, natural focus, serologic test, rodent, tick

ABSTRACT: In 1961 investigations were conducted to find natural foci of tularemia in Chuvash ASSR, a part of a large area where tularemia is practically unknown. Three methods of investigation were employed: 1) retrospective examination of the population by tularin skin allergy tests; 2) bacteriological investigation of ticks and organs of small animals; and, 3) serological testing (agglutination reaction) of cattle. Individual cases of persons with positive reactions to tularin were found, and most of these lived in areas

Card 1/2

L 58869-65

ACCESSION NR: AP5011272

2

located in the Prisura forests. Also, a new case of tularemia was disclosed. The most varied species of mammals and ixodic ticks capable of supporting tularemia foci were found in the southwestern part of the republic in the Prisura forests and the Sura river floodplains. The tularemia foci of Chuvash ASSR are of a latent nature due to the absence of any sharp rises in the number of rodents and relatively few water rats. However, an increase in the number of muskrats for commercial purposes may contribute to more active natural foci. Orig. art. has: None.

ASSOCIATION: Institut epidemiologii i mikrobiologii im. N. F. Gameli AMN SSSR (Epidemiology and Microbiology Institute AMN SSSR); Respublikan-skaya sanitarno-epidemiologicheskaya stantsiya Chuvashskoy ASSR (Sanitation-Epidemiological Station of Chuvash ASSR)

SUBMITTED: 25Nov63

ENCL: 00

SUB CODE: LS

NR REF SOV: 004

OTHER: 000

Card

4/21

KRAL', Karel [Kral, Karel]; VENEROVA, Kv'yeta [Venerova, Kveta];
PETROV, Vladimir; YURIN, B.A., red.

[Concise encyclopedia of the international trade-union
movement] Kratkaiia entsiklopediia mezhdunarodnogo prof-
soiuznogo dvizheniia. Moskva, Profizdat, 1963. 208 p.
Translated from the Czech. (MIRA 17:3)

BORZUNOV, N.A.; KUZ'MINA, N.Ya.; NEVYAZHSKIY, I.Kh.; OSOVETS, S.M.;
PETROV, Yu.F.; POLYAKOV, B.I.; POPOV, I.A.; KHODATAYEV, K.V.;
SHIMCHUK, V.P.

Studying a plasma on a traveling wave setup. Dokl. AN SSSR 152
no.3:581-584 S '63. (MIRA 1:12)

1. Predstavleno akademikom A.L.Mintsem.

OSIPENKO, A.I. (pos. Slavyanka, Khasanskogo rayona, Primorskogo kraya);
PETROV, V.G.

Multiple defects in the development of a newborn infant. Klin.
khir. no.10:75 0 '62. (MIRA 16:7)

(INFANTS (NEWBORN)—DISEASES)

PETROV, V.G., dotsent, kand. khimich. nauk

Some chemical properties of β -bis-dihydroxypropyl sulfide.
Uch. zap. Kab. Balk. gos. univ. no. 12: 241-246 '62.
(MIRA 16.6)

(Propyl sulfide)

PETROV, V.G.

Meeting of the Section of Structural Calculations of the
Commission for X-ray Study of the Academy of Sciences of
the U.S.S.R. Zhur.strukt.khim. 4 no.1:140-141 Ja-F '63. (MIRA 16:2)
(Academy of Sciences of the U.S.S.R.)
(X-ray crystallography)

L1868
S/081/62/000/024/038/073
B101/B186

AUTHOR: Petrov, V. G.
TITLE: Some chemical properties of β,γ -dihydroxy propyl-bis-sulfide
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 305-306,
abstract 24Zh128 (Uch. zap. Kabardino-Balkarsk. un-t,
no. 12, 1962, 241-246)

TEXT: 221 g glycerine- α -chloro hydrine dissolved in 300 ml alcohol is gradually added to a suspension of 201 g $K_2S \cdot 5H_2O$ in 600 ml alcohol. It is then kept boiling for 1.5 hrs until the reaction for K_2S is negative. The filtrate is evaporated on a boiling water bath at 10-12 mm Hg, and heated to 120-130°C/5-6 mm Hg, yielding $(CH_2OHCHOHCH_2)_2S$, $C_6H_{14}O_4S$ (I), $d_{20} 1.3598$. An aqueous solution of I (1:3) reacting with HBr yields $(CH_2BrCHBrCH_2)_2S$, $C_6H_{10}Br_4S$, $n_D^{21} 1.581$, $d_{20} 1.504$. Treatment of I with $(CH_3CO)_2O$ in CH_3COOH probably results in the formation of

Card 1/2

Some chemical properties of ...

S/061/62/000/024/035/073
3101/3156

$[\text{CH}_2(\text{COOCH}_3)\text{CH}(\text{COOCH}_3)\text{CH}_2]_n\text{S}$, $\text{C}_{14}\text{H}_{22}\text{O}_8\text{S}$, d_4^{15} 1.1228 which decomposes at 190-215°C. Benzoylation of I in 10% alkali solution gives the benzoyl derivative $\text{C}_{34}\text{H}_{30}\text{O}_8$ which melts in boiling water. A high-molecular glyptal-type substance (d_4^{21} 1.493, acid number 10.99, saponification number 252) which has reversible properties and starts melting at 154-166°C, is obtained by condensing 36.4 g of I with 59.2 g phthalic anhydride at 175°C. A solution of the resin in acetone produces a transparent film (stable at ~20°C) on glass and metal surfaces. [Abstracter's note: Complete translation.]

Card 2/2

PETROV, V.G.

Second conference on the use of computers in the structural
analysis of crystals. Kristallografiia 7 no.1:163-164 Ja-F
'62. (MIRA 15:7)

1. Institut kristallografiï AN BSSR.
(Electronic calculating machines)
(Crystallography, Mathematical)

LAZARENKO, N.I. [Lazarenko, M.I.]; PETROV, V.G. [Petrov, V.H.]

Rocks with annelid burrows in the Vise sediments of the western
Donets Basin. Geol. zhur. 20 no. 4:91-93 '60. (MIRA 14:4)
(Donets Basin—Rocks, Sedimentary) (Annelida)

KANASH, S.S., akademik, otv. red.; SHARDAKOV, V.S., kand. biol. nauk, otv. red.; GUBANOV, G.Ya., kand. biol. nauk, otv. red.; YENILBYEV, Kh.Kh., doktor biol. nauk, otv. red.; MUKHAMEDZHANOV, M.V., akademik, red.; RYZHOV, S.N., akademik, red.; ALIMOV, R.A., red.; DADABAYEV, A.D., akademik, red.; DZHALILOV, Kh.M., kand. ekon. nauk, red.; YEREMENKO, V.Ye., akademik, red.; ZAKIROV, K.Z., akademik, red.; MANNANOV, N.M., akademik, red.; NABIYEV, M.N., akademik, red.; SADYKOV, S.S., red.; TOGOYEV, I.N., kand. ekon. nauk, red.; YAKHONTOV, V.V., red.; ~~PETROV, V.G.~~, kand. sel'khoz. nauk, red.[deceased]; RAKHMANOVA, M.D., red.; BARTSEVA, V.P., tekhn. red.; KARABAYEVA, Kh.U., tekhn. red.

[Cotton] Khlopchatnik. Tashkent. Vol.4. [Physiology and biochemistry of cotton] Fiziologiya i biokhimiya khlopchatnika. 1960. 704 p. (MIRA 14:5)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. 2. Akademiya nauk Uzbekskoy SSR (for Mukhamedzhanov, Kanash, Zakirov, Nabiye, Yakhontov, Yeremenko) 3. Uzbekskaya akademiya sel'skokhozyaystvennykh nauk (for Mukhamedzhanov, Ryzhov, Dadabayev, Yeremenko, Zakirov, Mannanov) 4. Chleny-korrespondenty AN UzSSR (for Alimov, Yeremenko, Sadykov, Yakhontov) 5. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Kanash)

(Cotton)

PETROV, Vadim Konstantinovich, inzh.; SHLYAPINTOKH, Lev Samoylovich,
inzh.; POLYANSKAYA, T.D., nauchnyy red.; DEMINA, G.A., red.;
TOKER, A.M., tekhn.red.

[Collection of problems in electrical engineering] Sbornik
zadach po elektrotekhnike. Izd.3., ispr. i dop. Moskva, Vses.
uchebno-pedagog.izd-vo Proftekhizdat, 1960. 173 p.

(MIRA 13:5)

(Electric engineering--Problems, exercises, etc.)

PETROV, V.N., master

Some constructional deficiencies of the ER 1 electric train.
Elek.1 tepl.tiaga 4 no.1:9-10 Ja '60. (MIRA 13:4)

1. TSeKh tekushchego remonta depo Moskva Oktyabr'skoy dorogi.
(Electric railroads--Trains)

MANUKOVSKIY, Nikolay Fedorovich, Geroy Sotsialisticheskogo Truda. Prini-
mal uchastiye PETROV, V.P., inzh.. KOBLYAKOV, L.M., red.; GRESHNOVA,
V.P., tekhn.red.; TRUKHINA, O.N., tekhn.red.

[Over-all mechanization on collective farms] Kompleksnaya mekhani-
zatsiya v kolkhoze. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960.
70 p. (MIRA 13:7)

1. Mekhanizator kolkhoza imeni Kirova Novo-Usmanskogo rayona Voro-
nezhskoy oblasti (for Manukovskiy).
(Farm mechanization)

Agrotechnical factors of directed
PETROV, V. G., Cand Agr Sci -- (diss) "~~Agrotechnical~~ factors of directed
~~trans~~ cultivation of cotton in seed growing." Tashkent, 1954. 20 pp
(Min of Higher Education USSR, Tashkent Agr Inst), 150 copies (KL, 10-58,
122)

-80-

OLSUF'YEV, N.G.; PETROV, V.G.; SHLYGINA, K.N.

Detection of Erysipelothrix and Listeria in stream water.
Zhur.mikrobiol.epid. i immun. 30 no.3:89-94 Mr '59.

(MIRA 12:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

(WATER SUPPLY, microbiology,

Erysipelothrix rhusiopathiae & Listeria in
spring water (Rus))

(ERYSIPELOTHRIX,

rhusiopathiae in spring water (Rus))

(LISTERIA,

in spring water (Rus))

OLSUF'YEV, N.G.; KUCHERUK, V.V.; PETROV, V.G.

Studying natural tularemia reservoirs of the piedmont stream type. Zool.zhur. 38 no.3:334-346 Mr '59. (MIRA 12:4)

1. Department of Infections of Natural Nidality, Institute of Epidemiology and Microbiology, Academy of Medical Sciences of the U.S.S.R. (Moscow).

(Altai Territory--Tularemia) (Rats as carriers of disease)
(Ticks as carriers of disease)

FEDOTOV, P.I.; PETROV, V.G.; ROZMARIN, Sh. V.

Ectopic chorioepithelioma of the mediastinum. Sovet. med. 23 no.2:
135-137 P 159. (MIRA 12:3)

(CHORIOCARCINOMA, case reports
mediastinum (Rus))
(MEDIASTINUM, neoplasms
choriocarcinoma (Rus))

USSR/Technical Crops. Oil Plants. Sugar Plants.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77741.

Author : Petrov, V. G.

Inst :

Title : Distribution of Cotton by a Scheme 60 x 60 cm with
an Oblong Nest.

Orig Pub: Sots. s.-kh. Uzbekistana, 1957, No 12, 12-16.

Abstract: In the "Ak-Kurgan" Sovkhoz, different schemes of cotton sowings were tested in 1955-1956 on large areas - 45 x 45 cm, 55 x 55, 60 x 60, 50 x 50, 60 x 45, with a row x 60, row x 40 cm. The scheme 45 x 45 cm proved unsuitable for mechanized cultivation of sowings. The scheme 55 x 55 allowed the mechanization of cultivation in 2 directions, but the mechanization of mowing proved to be in-

Card : 1/3

USSR/Technical Crops. Oil Plants. Sugar Plants.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77741.

with the preservation of the normal quantity of the plants (on the average 97 thousand per 1 ha), provides the possibility of cultivation in 2 directions by tractors with one track, improves the microclimate conditions for fuller germinations, which reduce the outlay of seeds and assures harmonious ripening and opening of the bolls. -- B. L. Klyachko-Gurvich.

Card : 3/3

USSR/Technical Crops. Oil Plants. Sugar Plants.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77753.

Author : Petrov, V.G.

Inst :

Title : Means of Increasing the Harvest of Cotton and Decreasing its Net Cost.

Orig Pub: V. sb.: Materialy Ob'yedin. nauchn. sessii po khlopkovodstvu, T.I. Tashkent, Gosizdat UzSSR, 1958, 572-580.

Abstract: No abstract

KUCHERUK, V.V.; PETROV, V.G.; DUNAYEVA, T.N.; PSHENICHNAYA, L.A.;
MEDVEDEVA, M.S.; GIUSEKO, N.V.

Characteristics of the natural foci of tularemia in forest shelter-
belts and ways of controlling them. Vop.kraev., ob. i eksp.paraz. i
med.zool. 9:140-152 '55. (MLRA 10:1)

1. Iz otdela parazitologii i meditsinskoy zoologii (zav. - akad.
Ye.N.Pavlovskiy) Instituta epidemiologii i mikrobiologii imeni
N.F.Gamaleya (dir. - deystvitel'nyy chlen Akademii meditsinskikh
nauk SSSR prof. G.V.Vygodchikov) Akademii meditsinskikh nauk SSSR i
Stavropol'skogo protivoepidemicheskogo instituta (dir. V.N.Ter-
Vartanov) Ministerstva zdravookhraneniya SSSR.
(TULAREMIA) (WINDBREAKS, SHELTERBELTS, ETC.)

PETROV, V.G.

Conference of administrative personnel from building machinery
plants and organisations of the Moscow (Municipal) Council
of the National Economy. Stroi. i dor. mashinostr. 2 no.11:40
N '57. (MIRA 11:1)
(Moscow--Building machinery industry--Congresses)

PETROV, V.G. and DUNAYEVA, T.N.

"The Dependence of Infecting Ixodes Ticks on a Particular Strain of
Tularemia from Animal Donors," (1955).

PETROV, V.G., OLSUF'YEV, N.G., YAMOLOVA, N.S., MAIKHALEVA, V.A., SAMSONOV, A.P.
and KHL'YUSTOVA, A.I.

"The Roles of the Tick Rhipicephalus Rossicus Jakim Et K.-Jakim in the
Support of Tularemia Infection in the Natural Strain of the Named Type." Zool.
Zhur. 34, No. 6, 1955.

PETROV, V.G.; DUNAYEVA, T.N.

Infection of the ticks of the family Ixodidae with tularemia as affected by the course of tularemia in animal donors. Vop.kraev., ob. i eksp.paraz. i med.zool. 9:153-161 '55. (MLRA 10:1)

1. Iz laboratorii tulyaremii (zav. - prof. N.G.Olsuf'yev), otdela parazitologii i meditsinskoy zoologii (zav. - akad. Ye.N.Pavlovskiy) Instituta epidemiologii i mikrobiologii imeni N.F.Gamaleya. (dir. - deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. G.V. Vygodchikov) Akademii meditsinskikh nauk SSSR.

(TULAREMIA) (TICKS AS CARRIERS OF DISEASE)

PETROV, V.I., kand. tekhn. nauk

Applying mathematical programming and electronic computers
to the planning of the development and distribution of the
rock products industry. Sbor. trud. VNIINerud no.4:128-147
'65. (MIRA 18:11)

PETROV, V.I., kandyd. tekhn. nauk

Using mathematical programming and electronic computers to study
the development and distribution of the pork production industry.
Izv. vys. ucheb. zav.; gor. zhur. 8 no. 4:31-38, 1965. (12A 14:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut perestroyki i razvitiya
zestl.

BABICHEV, S.I., dotsent; PETROV, V.I., kand.med.nauk; MIKHALCHENKO, V.A.

Dynamic study of oscillography in patients with mitral stenosis.
Khirurgiia 36 no.9:81-86 S '60. (MIRA 13:11)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - zaslushennyy
deyatel' nauki prof. B.V. Petrovskiy) i Moskovskogo ordena Lenina
meditsinskogo instituta imeni I.M. Sechenova i Tsentral'nogo
instituta rentgenologii i radiologii (dir. - prof. I.G. Logunova)
Ministerstva zdravookhraneniya RSFSR.
(MITRAL VALVE--DISEASES) (OSCILLOGRAPHY)

DAVYDOVA, A.A.; PETROV, V.I.; GULYANITSKIY, N.A.

Some results of the control of intestinal infections in Dnepropetrovsk. Zhur. mikrobiol., epid. i immun. 33 no. 12:89-95.
D '62. (MIRA 16:5)

1. Iz Dnepropetrovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.

(DNEPROPETROVSK-- INTESTINES--DISEASES)

PETROV, V.I., kand. tekhn. nauk

Using mathematical programming and electronic computers for
planning the production and distribution of building materials.
Izv. vys. ucheb. zav.; gor. zhur. 7 no.5:47-52 '64.

(MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnykh
stroitel'nykh materialov i gidromekhanizatsii.

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva);
 PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof.
 (Leningrad); ADO, A.D., prof.; VOYSI, M.S., prof.;
 YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan');
 PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P.,
 prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk);
 KHMEI'CHONOK, I.P. (Irkutsk); TENKIN, Ya.S., prof. (Moskva);
 MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor
 med.nauk (Leningrad); TRUTNEV, V.K., zasluzhennyy deyatel' nauki,
 prof.; TSYRESHKIN, B.D., kand.med.nauk (Moskva); SOBOL', I.M.,
 prof. (Stavropol'); TURIK, G.M. (Moskva); FRENKEL', M.M. (Moskva);
 MAZO, I.L.; POKRYVALOVA, K.P.; PROSKURYAKOV, S.A., prof.;
 ATKARSKAYA, A.A., prof.; GCL'DFARB, I.V., prof. (Izhevsk);
 PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; VOLPSON, I.Z.,
 prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin);
 ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg);
 MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N.,
 prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G.,
 prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha,
 gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59.

(MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for ADO). 2. Direktor Moskovskogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).
- (OTORHINOLARYNGOLOGY—CONGRESSES)

SKOROV, V.A.; STEPANOV, I.S.; SHAKHNAZAROV, A.K., inzhener-metallurg, pensioner; PERKOV, V.I., Geroy Sotsialisticheskogo Truda; BA.YULIKOV, I.P., starshiy inzhener; BUGAREV, I.A.; LAKERNIK, M.M., kand.tekhn. nauk; SHEYN, Ya.P.; MOLCHANOV, A.A.

The greatest objective of our life. TSvet.met. 34 no.10:1-10
O '61. (MIRA 14:10)

1. Glavnyy inzhener Skopinskogo zavoda "TSvetmet" (for Skorov).
 2. Zamestitel' predsedatelya Mezhdudovomstvennoy komissii po redkim metallam pri Gosudarstvennom komitete Soveta Ministrov SSSR po koordinatsii nauchno-issledovatel'skikh rabot (for Stepanov).
 3. Rukovoditel' brigady kommunisticheskogo truda elektroliznogo tsekh. Ural'skogo alyuminiyevogo zavoda (for Petrov).
 4. Otdel tsvetnoy metallurgii Gosplana SSSR (for Baryshnikov).
 5. Nachal'nik podotdela otdela ekonomiki i razvitiya tsvetnoy metallurgii Gosekonomsoвета SSSR (for Bugarev).
 6. Zamestitel' direktora po nauchnoy chasti Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metellov (for Lakernik).
 7. Starshiy ekspert upravleniya Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (for Sheyn).
 8. Glavnyy spetsialist otdela tsvetnoy metallurgii Gosplana SSSR (for Molchanov).
- (Communism)

L 62202-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP5015877

UR/0080/65/038/006/1217/1224 17
546.821 16
11

AUTHOR: Petrov, V. I.; Lokshin, R. G.; Mal'shin, V. M.; P'vankov, F. A.; Sokolov, I. I.

TITLE: Development of a standard process for preparing titanium sponge

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 6, 1965, 1217-1224

TOPIC TAGS: titanium refining, titanium tetrachloride, titanium sponge

ABSTRACT: After discussing the four possible variants used for standardizing the magnesiothermic reduction process by which titanium is obtained from its tetrachloride, the authors show that the variant involving a stable feed rate of $TiCl_4$ during the entire process is preferred over the others. The following four conditions are necessary for creating a periodic standard reduction process: (1) a ratio of material flows in the reactor which is reproducible in each process; (2) continuous maintenance of thermal equilibrium in the reactor for given temperature conditions; (3) uniform distribution and removal of the heat of reaction along the perimeter of the reactor; (4) maintenance of the reaction zone at a constant level. The technology, apparatus, and automatic control of the standard reduction process are described, and corresponding diagrams are given. These principles were applied to the development of a standard reduction process at the Bereznikovskiy titan-

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L 62292-65

ACCESSION NR: AP5015877

magniyevyy kombinat (Berezniki Titanium-Magnesium Combine) in 1960-1961. The data obtained show that the basic principles of the standard reduction process reflect the relationships inherent in the reduction reaction, the properties of the reactor, and the existing technological potential of the process. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 06Aug62

ENCL: 00

SUB CODE: MM

NO REF SOV: 008

OTHER: 003

llc
Card 2/2

MANYAKIN, G.I.; PETROV, V.I.

PTR3 type semiconductor temperature regulator. Prioritization
no.11&29 N 164.

(MIR: 18-1)

PETROV, V.I.; GOELEVSKAYA, M.V.; SYRKASHEVA, A.V.; RAYKHSHTAT, G.N.;
SHAPIRO, A.A.; BERLOVICH, E.A.; KARASEVA, M.F.; RYUMINA, M.G.
LEYKINA, R.S.; BROKER, T.N.; GITARIN, D.Yu.; MOSKOVENKO, D.F.;
STASILEVICH, Z.K.; REUT, A.I., ALIYEVA, S.G.

Annotations. Zhur. mikrobiol., epid. i immun. 40 no.2:109-112
F '63. (MIRA 17:2)

1. Iz Dnepropetrovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii (for Petrov). 2. Iz Saratovskogo meditsinskogo instituta i Saratovskoy gorodskoy sanitarno epidemiologicheskoy stantsii (for Godlevskaya, Syrkasheva). 3. Iz sanitarno-epidemiologicheskoy stantsii Sverdlovskogo rayona Moskovy (for Raykhshtat, Shapiro, Berlovich, Karaseva, Ryumina, Leykina, Broker). 4. Iz Instituta eksperimental'noy patologii i terapii AMN SSSR (for Stasilevich). 5. Iz Belorusskogo sanutarni-gigiyenicheskogo instituta (for Reut). 6. Iz Uzbekskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (for Aliyeva).

PETROV, V.I.

Heating of cast iron on the cupola runner using a low voltage,
commercial frequency current. Nauk, ^aprōtsi Inst.lyv.vyrob.AN URSR
9:102-107 '60. (MIRA 15:3)

(Cast iron--Metallurgy)

(Cupola furnaces)

DOBRUNOV, G.M.; SMIRNOVA, T.A.; BLINOV, A.N.; RUDKIN, A.G., konstruktor;
MIKHEYEV, V.P., konstruktor; MAL'TSEV, B.G., konstruktor; PETROV,
V.I., konstruktor; BASINKEVICH, I.R., red. izd-va; SHIBLOVA, R.Ye.,
tekh. red.

[Album of standard shielding and protecting devices for basic
types of sawmilling and woodworking equipment] Al'bum tipovykh
ograditel'nykh ustroystv i predokhranitel'nykh prispособlenii
dlia osnovnykh vidov lesopil'no-derevoobrabatyvaiushchego oboru-
dovaniia. Moskva, Goslesbunizdat, 1963. 51 p. (MIRA 16:9)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut me-
khanicheskoy obrabotki drevesiny.
(Woodworking machinery--Safety measures)

MATVEYEV, V.V., inzh.; LUSHNIKOV, A.M., kand.tekhn.nauk; Prinsipali
uchastiye: KOVALEV, A.I.; PETROV, V.I.

Instruments for the automatic control of the viscosity and level
of liquids in the manufacture of artificial leather. Nauch.-
issl.trudy VNIIPK no.12:95-104 '60. (MIRA 16:2)

1. Laboratoriya avtomatiki Vsesoyuznogo nauchno-issledovatel'skogo
instituta plenochnykh materialov i iskusstvennoy kozhi (for
Petrov).

(Automatic control) (Viscosimeter) (Liquid level indicators)

PETROV, V.I.

Zirconium targets on copper and silver base layers. Prib. i
tekh. eksp. 6 no.2:174-176 Mr-Ap '61. (MIRA 14:9)
(Particle accelerators--Equipment and supplies)

PETROV, V.I.

Sanitary supervision of planned sanitary waste disposal in
Dnepropetrovsk. Gig. i san. 25 no.7:48-50 JI '60.

1. Iz gorodskoy sanitarno-epidemiologicheskoy stantsii Dnepro-
petrovska. (MIRA 14:5)

(DNEPROPETROVSK--REFUSE AND REFUSE DISPOSAL)

PETROV, V.I., inzh.

Correlation theory in setting standards for hydraulic construction.
Gidr.stroi. 31 no.8:48-49 Ag '61. (MIRA 14:8)

(Hydraulic structures)

PETROV, V.I.; PINSKAYA, F.S.; LOGACHEVA, L.I.

Case of fluorine damages to green plants. Gig.i san. 26 no.1:77
Ja '61. (MIRA 14:6)

1. Iz Dnepropetrovskoy gorodskoy sanitarno-epidemiologicheskoy
stantsii. (AIR-POLLUTION) (PLANTS, EFFECT OF FLUORINE ON)

24.5200 (1498)
26.2221

S/089/61/011/003/009/013
B'02/B'38

AUTHORS: Astakhov, O. P. Petrov, V. I. Fedynskiy, O. S.

TITLE: Thermal contact resistance in the case of heat withdrawal to liquid metals

PERIODICAL: Atomnaya energiya, v. 11, no. 3 1966, 255-257

TEXT: The heat-transfer theory by Martinelli-Lyon (R. Lyon, Chem Engng Progr. 47, no. 2, 75, 1951) has only been confirmed experimentally for the case of large tube diameters. Tube diameters < 10 mm yield values which refute this theory. The discrepancy between experiment and theory is said to be due to the neglect of thermal contact resistance at the interface wall-liquid metal. The present "Letter to the Editor" offers a theoretical study of the effect of this contact resistance R (in m²hr⁰C/kcal) on the relationship between the measured heat-transfer coefficient α and the theoretical heat-transfer coefficient α_0 . $1/\alpha = 1/\alpha_0 + R$; $\alpha/\alpha_0 = Nu/Nu_0 = 1/(1 + R \lambda_{liq} Nu_0/d)$; λ_{liq} - heat conduction coefficient of the liquid metal, d = inner tube diameter; Nu is the Nusselt number; the

X

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Thermal contact resistance in the

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B'02/B'38

subscript o denotes the quantities calculated according to the Martinelli-Lyon theory. It follows that experimental results obtained for tube diameter d cannot be used for calculating the heat transfer in another case, where the tube diameter differs from d since R depends both on d and the flow rate. The argument is developed to show that agreement between experiment and theory can only be achieved for wide tubes. The quantity $(R\lambda_{liq}/d)$ is the determinative parameter of heat transfer, which allows for thermal contact potential. Conditions are illustrated by a practical example. For $d = 24$ mm ($Re > 10^4$), $Nu/Nu_o = 0.95$ and the contact resistance value is estimated as $R = 2.13 \cdot 10^{-6}$ m²hr°C/kcal, which is in good agreement with experimental data. If, however, $d = 3$ mm, then $Nu/Nu_o = 0.703$, which means that the divergence from theory is as high as 30%. To study R as a function of flow rate, a practical example is again considered. $d = 8.6$ mm (copper tube), $t_{liq,Na} = 240^\circ C$, $Nu = 5.9 + 0.05 Pe^{0.8}$, $Nu/Nu_o = 0.75$, $\lambda_{liq} = 68$ kcal/m.hr°C. This yields $R = 4.22 \cdot 10^{-5} / Nu_o (Pe)$; $Pe = 200 - 1400$. In this range, R was only slightly dependent on flow rate as illustrated

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Thermal contact resistance in the...

by curve 1 where $R'(w)$ is shown at $d = \text{const.}$ Curve 2 shows α/α_0 as a function of d taking account of $R'(w)$. Agreement between experiment and theory is found with the Peltier numbers mentioned, i.e., d must be somewhat larger than 20 mm. It is finally suggested for a better confrontation between experiment and theory that experimental results be represented in $Nu^{-1}(Pe)$ diagrams instead of $Nu(Pe)$ diagrams. The dimensionless representation $R'\lambda_{liq}/d = 1/Nu - 1/Nu_0$ also proved to be expedient. There are 1 figure and 14 references: 8 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: Ref. 9: B. Lubarsky, S. Kaufmann. Review of Experimental Investigations of Liquid Metal Heat Transfer. NACA, Report 1270, 1956; Ref. 12: H. Brown, B. Amstead, B. Short. Trans. ASME, 79, No. 2 (1957); Ref. 13: S. Isakoff, T. Drew. General Discussion on Heat Transfer. London Conference, 1951, p. 405; Ref. 14: M. Jacob. Heat Transfer, v. 11, N.-Y., John Wiley a. Sons, Inc. 1957, p. 504.

SUBMITTED: March 12, 1961

Card 3/4

X

KAZAKBICH, Y.G.I.; YEMENBE, A.V.; PETROV, V.I.

Effect of a promoting substance of petroleum origin on the
isolated frog heart. *Izv. vuz. vys. shkoly; biol. nauki* no. 3:50-
52, 1965. (MIRA 18:8)

L. Rekomendovana laboratornyy fil. 1965 Brestskogo pedagogicheskogo
instituta.

PETROV, V.I.

GEL'MAN, M.I.; BIRANIN, V.G.; HELYAYEVSKIY, A.G.; ANDREYEV, A.I.;
BEZMEKHOV, V.P.; PETROV, V.I.

On new technological processes. Der.prom.4 no.1:19-21 Ja'55.
(MLRA 8:3)

1. Ust'-Izhorskiy fanernyy zavod.
(Ust'-Izhora—Plywood)

ANDON'YEV, V.I.; BAUM, V.A.; BAUMGARTEN, N.K.; BEREZIN, V.D.; BIRYUKOV, I.K.;
 BIRYUKOV, S.M.; BLOKHIN, S.I.; BOROVOY, G.A.; BULEV, M.Z.; BURAKOV,
 N.A.; VERTSAYZER, B.A.; VOVK, G.M.; VORMAN, B.A.; VOSHCHININ, A.P.;
 GALAKTIONOV, V.D., kand. tekhn. nauk; GENKIN, Ye.M.; GIL'DENBLAT,
 Ya.D., kand. tekhn. nauk; GINZBURG, M.M.; GLEBOV, P.S.; GODES, E.G.;
 GOBRACHEV, V.N.; GRZHIB, B.V.; GREKULOV, L.F., kand. s.-kh. nauk;
 GRODZHENSKAYA, I.Ya.; DANILOV, A.G.; DMITRIYEV, I.G.; DMITRIYENKO,
 Yu.D.; DOBROKHOTOV, D.D.; DUBININ, L.G.; DUNDUKOV, M.D.; ZHOLIK,
 A.P.; ZENKEVICH, D.K.; ZIMAREV, Ye.V.; ZIMASKOV, S.V.; ZUBRIK, K.M.;
 KARANOV, I.F.; KNYAZEV, S.N.; KOLEGAYEV, N.M.; KOMAREVSKIY, V.T.;
 KOSENKO, V.P.; KORENISTOV, D.V.; KOSTROV, I.N.; KOTLYARSKIY, D.M.;
 KRIVSKIY, M.N.; KUZNETSOV, A.Ya.; LAGAR'KOV, N.I.; LGALOV, V.G.;
 LIKHACHEV, V.P.; LOGUNOV, P.I.; MATSKOVICH, K.F.; MEL'NICHENKO,
 K.I.; MENDELEVICH, I.R.; MIKHAYLOV, A.V., kand. tekhn. nauk;
 MUSIYEVA, R.N.; NATANSON, A.V.; NIKITIN, M.V.; OVES, I.S.;
 OGUL'NIK, G.R.; OSIPOV, A.D.; OSMER, N.A.; ~~PEYBON, V.I.~~; PERYSHKIN,
 G.A., prof.; P'YANKOVA, Ye.V.; RAPOFORT, Ya.D.; REMEZOV, N.P.;
 ROZANOV, M.P., kand. biol. nauk; ROCHEGOV, A.G.; RUBINCHIK, A.M.;
 RYBCHEVSKIY, V.S.; SADCHIKOV, A.V.; SEMENTSOV, V.A.; SIDENKO, P.M.;
 SINYAVSKAYA, V.T.; SITAROVA, M.N.; SOSNOVIKOV, K.S.; STAVITSKIY,
 Ye.A.; STOLYAROV, B.P. [deceased]; SUDZILOVSKIY, A.O.; SYRISOVA,
 Ye.D., kand. tekhn. nauk; FILIPPSKIY, V.P.; KHALTURIN, A.D.;
 TSISHEVSKIY, P.M.; CHERKASOV, M.I.; CHERNYSHEV, A.A.; CHUSOVITIN,
 N.A.; SHESTOPAL, A.O.; SHEKHTER, P.A.; SHISHKO, G.A.; SHCHERBINA,
 I.N.; ENGEL', P.F.; YAKOBSON, A.G.; YAKUBOV, P.A., ARKHANGEL'SKIY,
 (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 2.

Ye.A., retsenzant, red.; AKHUTIN, A.N., retsenzant, red.; BALASHOV,
 Yu.S., retsenzant, red.; BARABANOV, V.A., retsenzant, red.; BAYDNER,
 P.D., retsenzant, red.; BORODIN, P.V., kand. tekhn. nauk, retsenzant,
 red.; VALUTSKIY, I.I., kand. tekhn. nauk, retsenzant, red.;
 GRIGOR'YEV, V.M., kand. tekhn. nauk, retsenzant, red.; GUBIN, M.F.,
 retsenzant, red.; GUDAYEV, I.N., retsenzant, red.; YERMOLOV, A.I.,
 kand. tekhn. nauk, retsenzant, red.; KARAULOV, B.F., retsenzant,
 red.; KRITSKIY, S.N., doktor tekhn. nauk, retsenzant, red.; LIKIN,
 V.V., retsenzant, red.; LUKIN, V.T., retsenzant, red.; LUSKIN, Z.D.,
 retsenzant, red.; MATIROSOV, A.Kh., retsenzant, red.; MENDELEYEV,
 D.M., retsenzant, red.; MENKEL', M.F., doktor tekhn. nauk, retsenzant,
 red.; OBRIZKOV, S.S., retsenzant, red.; PETRASHEN', P.N., retsenzant,
 red.; POLYAKOV, L.M., retsenzant, red.; RUMYANTSSEV, A.M., retsenzant,
 red.; RYABCHIKOV, Ye.I., retsenzant, red.; STASENKOY, N.G., retsenzant,
 red.; TAKANAYEV, P.F., retsenzant, red.; TARANOVSKIY, S.V.,
 prof., doktor tekhn. nauk, retsenzant, red.; TIZDEL', R.P., retsenzant,
 red.; FEDOROV, Ye.M., retsenzant, red.; SHEVYAKOV, M.N.,
 retsenzant, red.; SHMAKOV, M.I., retsenzant, red.; ZHUK, S.Ya.
 [deceased], akademik, glavnyy red.; FUSCO, G.A., kand. tekhn. nauk,
 red.; FILIMONOV, N.A., red.; VOLKOV, L.N., red.; GRISHIN, M.M., red.;
 ZHURIN, V.D., prof., doktor tekhn. nauk, red.; KOSTROV, I.N., red.;
 LIKHACHEV, V.P., red.; MEDVEDEV, V.M., kand. tekhn. nauk, red.;
 MIKHAYLOV, A.V., kand. tekhn. nauk, red.; PETROV, G.D., red.; RAZIN,
 N.V., red.; SOBOLEV, V.P., red.; FERINGER, B.P., red.; FREYGOFER,
 (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 3.

Ye.F., red.; TSYPLAKOV, V.D. [deceased], red.; KORABLINOV, P.N.,
tekhn. red.; GENKIN, Ye.M., tekhn. red.; KACHKROVSKIY, N.V., tekhn.
red.

[Volga-Don; technical account of the construction of the V.I. Lenin
Volga-Don Navigation Canal, the TSimlyansk Hydroelectric Center,
and irrigation systems] Volgo-Don; tekhnicheskii otchet o stroitel'-
stve Volgo-Denskogo sudokhodnogo kanala imeni V.I. Lenina, TSim-
lianskogo gidrouzla i orositel'nykh sooruzhenii, 1949-1952; v piati
tomakh. Moskva, Gos. energ. izd-vo. Vol.1. [General structural
descriptions] Obshchee opisanie sooruzhenii. Glav. red. S.IA. Zmk.
Red. toma M.M. Grishin. 1957. 319 p. Vol.2. [Organization of con-
struction. Specialized operations in hydraulic engineering] Orga-
nizatsiia stroitel'stva. Spetsial'nye gidrotekhnicheskie raboty.

(Continued on next card)

ANDON'YEV, V.I.... (continued) Card 4.

Glav. red. S. I.A. Zhuk. Red. toma I.N. Kostrov. 1958. 319 p.

(MIRA 11:9)

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsii. Byuro
tekhnicheskogo otcheta o stroitel'stve Volgo-Dona. 2. Chlen-kor-
respondent Akademii nauk SSSR (for Akhutin). 3. Deystvitel'nyy
chlen Akademii stroitel'stva i arkhitektury SSSR (for Grishin,
Razin).

(Volga Don Canal--Hydraulic engineering)

BAUM, V.A., doktor tekhn.nauk, otv.red.; TOLSTOV, Yu.G., doktor tekhn.
nauk, red.; PETROV, V.I., kand.tekhn.nauk, red.; KOLCHANOGOVA,
I.P., kand.tekhn.nauk, red.; LIBKIND, M.S., kand.tekhn.nauk,
red.; NABOKO, I.M., inzh., red.; BABURIN, B.L., inzh., red.;
BOL'SHOV, N.D., red.; BURAKOV, S.Ye., tekhn.red.

[Proceedings of the Fifth Conference of Young Scientists]
Trudy V konferentsii molodykh uchenykh. Moskva, Akad.nauk
SSSR, Energ.in-t. Vol.1. 1960. 91 p. Vol.2. 1960. 79 p.
(MIRA 14:3)

1. Konferentsiya molodykh uchenykh. 5th.
(Electric power distribution)

SOV/11-5-5-1/32

AUTHORS: Serbinov, A. N., Petrov, V. I.

TITLE: High Frequency ~~Discharge Ion Sources~~ (A Review) (Ionnyye istochniki s vysokochastotnym razryadom)(Obzor)

PERIODICAL: Priory i tekhnika eksperimenta, 1958, Nr 5, p. 3-17 (USSR)

ABSTRACT: This review is based on 46 papers, most of which are of Western origin. Most of the references are pre-1954. The review is divided into the following sub-sections:
1) Processes which take place in the discharge chamber of a high frequency ion source. 2) Methods of obtaining an ion beam from the plasma of a high frequency discharge. 3) Constructional details of high frequency ion sources. The two Soviet sources described in the paper are illustrated in Figs. 14 and 16. Fig.14 shows an ion source for an electrostatic generator (Ref.17). The discharge chamber, 1, and the insulating cylinder, 2, are made in one piece from quartz and may be displaced relative to the cathode, 3. The discharge in a transverse magnetic field is excited by the generator, 4, having a frequency of 50 Mc/s and a transverse magnetic field is produced by a permanent magnet, 5. The beam is focussed by the lens, 6. The total power required is 300 W and the gas consumption is low (1 to 1.5 cm³/hr).

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107/120-5c-5-1/51

High Frequency Discharge Ion Sources (A Review)

The source shown in Fig.15 was developed for Soviet 2.5 MeV electrostatic generators (Ref.37). The discharge in a transverse magnetic field is excited at a frequency of 40 Mc/s in a pyrex discharge chamber. The isolating cylinder is made of quartz. A fuller description of this source will be given in Ref.37 (in press). There are 15 figures, 2 tables and 45 references, of which 4 are Soviet and the rest are Western.

SUBMITTED: April 3, 1950.

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89359

S/089/61/010/002/009/018
R102/B209

24.6900

AUTHOR: Petrov, V. I.

TITLE: An intense neutron generator with energies of 14 and 2.5 Mev

PERIODICAL: Atomnaya energiya, v. 10, no. 2, 1961, 163-164

TEXT: Usually, a high-voltage accelerator is employed in generating 14- and 2.5-Mev neutrons; the maximum intensity of the D-T neutron flux obtained from such a device hardly exceeds 10^{10} n/sec, an increase to 10^{11} n/sec and more involves considerable technical difficulties. In the present "Letter to the Editor" a neutron generator is described, by means of which a D-T neutron intensity of over 10^{11} n/sec and a D-D neutron intensity of 10^{10} n/sec may be attained. The device is shown in the figure. The generator is operated with an ion source with h. f. -discharge of the following parameters: D-ion current from the source 9 - 11 ma, deuteron content 85%, deuteron flow rate $53 \text{ cm}^3/\text{hour}$, length of the expansion canal 10 mm, diameter 3 mm, expansion voltage 7 - 8 kv, power consumed by the h. f. -generator (25 Mc/sec) 500 - 600 w. The chamber of the ion generator is built so, that the

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An intense neutron ...

distance between source and target is kept as short as possible which facilitates focusing and acceleration; the chamber consists of two parts containing the electrodes of the focusing and acceleration path. The former is insulated by a porcelain cylinder, the latter by organic glass. The electrodes of the accelerating path are mobile. The high vacuum in the acceleration chamber is maintained by a diffusion pump (1000 l/sec) and a vacuum forepump. The operational vacuum in the chamber with an ion current of several milliampères was about $1 \cdot 10^{-5}$ mm Hg. An electromagnet establishing a transverse magnetic field along the ion-beam trajectory was placed at the end of the acceleration chamber. Its secondary winding was a water-cooled copper pipe (5x3 mm). This magnet had to be applied since previous experiments without it showed that a counter-current of electrons arises which, in magnitude, was comparable to the ion current and which interfered in the stable operation of the ion source. The magnetic transversal field not only eliminated the interference by this electron current but also improved the conditions for the target. The high voltage was fed into the accelerator by a d. c. -generator (200 kv, 20 ma) and by a rectifier (30 kv, 30 ma); the former fed the discharge gap, the latter the focusing path. The ...

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An intense neutron ...

voltage generator was designed for single-stage connection and voltage doubling. Its principal elements were: An MM-100-0.1 (IM-100-0.1) multiplier, a KP-220 (KR-220) kentrotron, and an MOA-100/25 (OM-100/25) high-voltage transformer. The high-voltage rectifier consisted of a MPA-110 (KREMA-110) bridge, the voltage was fed via a special transformer. Zirconium targets saturated with deuterium or tritium placed on a silver or copper backing (25 mm in diameter, 1.5 - 2 mm thick) were used in the neutron generator. The target was cooled by a water jet; in spite of intense cooling the maximum permissible ion current at the target could not exceed 2.5 - 3 ma. However, by shifting the beam on the target the ion current could be increased to 5 ma. The neutron generator was started up in 1959 (assembly by V. P. Zyuzin, R. N. Morozov, and V. P. Suslov); the following data of operation were found: Maximum intensity of the 14-Mev neutron flux $5.3 \cdot 10^{11}$ n/sec; of the 2.5 Mev flux $5 \cdot 10^9$ n/sec. Deuteron current on the target 5 ma; total accelerating voltage 200 - 210 kv; maximum deuterium ion current 10 ma. There is 1 figure.

X

SUBMITTED: May 28, 1960

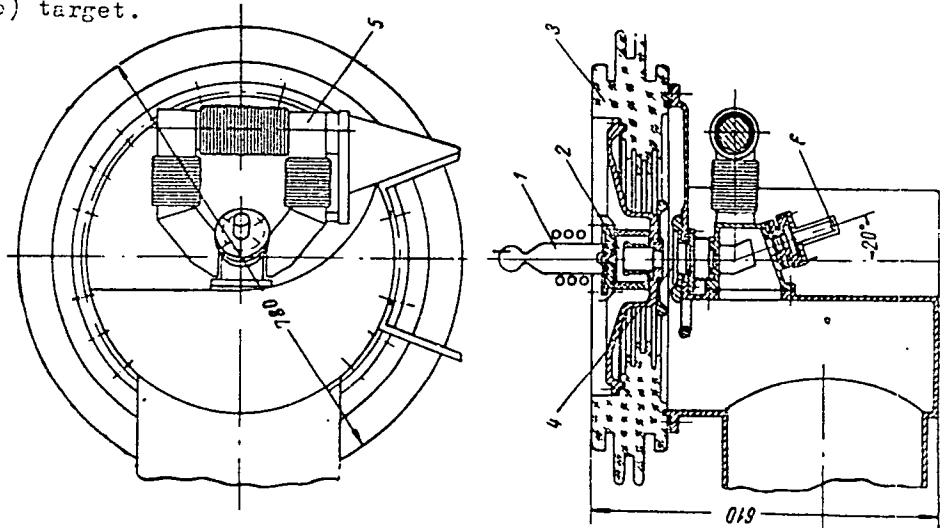
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89359

An intense neutron ...

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Legend to Figure: 1) Ion source;
2) focusing path; 3) insulator;
4) accelerating path; 5) electro-
magnet; 6) target.



20925

26.2212
26.2311

S. 057/81/011, 012, 013, 019
B125/B202

AUTHORS: Komarov, R. M. and Petrov, V. I.

TITLE: Study of a high-frequency discharge in a proton source

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 3, 1961, 321-326

TEXT: The authors discuss the effect of gas pressure in a high-frequency proton source on the temperature T_e of the electrons, the ionization density n_1 of the atomic hydrogen, the power W consumed by the discharge and on the ion current I_M emerging from the source. These high-frequency discharges were studied with and without application of a high-frequency field. The change of n_1 and T_e during the discharge as a function of gas pressure was studied by optical methods. The ionization density (in relative units) was determined by using the relation $n_1 = \text{const}_\beta C_\beta(T_e)$ where I_β is the intensity of the line H_β and $C_\beta(T_e)$ is a function of the excitation cross section and of the ionization cross section of hydrogen as well as of the energy distribution of the electrons in the discharge. The

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10925

Study of a high-frequency

3 057.67, 031, 108, 109, 110
B-201/B202

absolute value of the power consumed by the discharge was not measured but only the character of the change of this power as a function of the gas pressure in the source with and without external magnetic field. The experiments were made on a special vacuum stand. The experimental scheme is shown in Fig. 1. The high-frequency discharge was excited by means of a 25 mc generator. The light which was produced during the discharge was directed to a KC-55 (KS-55) spectrograph by means of a lens system. A FEU-25 (FEU-25) photomultiplier was directly connected behind the outlet of the spectrograph. The ion current emerging from the source was captured by a beam catcher. The external transverse magnetic field was produced by means of an NS electromagnet. All measurements were made with reduced power of the generator. Fig. 2 illustrates the dependence of the electron temperature on the pressure of hydrogen in the discharge chamber. Fig. 4 shows the dependence of the concentration of atomic hydrogen ions on gas pressure. Fig. 5 shows the dependence of the power at the lateral wall of the discharge chamber on the gas pressure; Fig. 6 shows the change of the total current of hydrogen ions as a function of gas pressure if a transverse magnetic field is applied. Fig. 7 illustrates the same as is

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B125/B202

Study of a high-frequency...

shown in Fig. 6, however, without external magnetic field. The results of measurements may be summarized as follows: 1) the temperature of the electrons in a high-frequency discharge can be considerably reduced: a) with an increase in the gas pressure in the source; b) by the application of an external transverse constant magnetic field, especially at pressures below $35-40 \cdot 10^{-3}$ mm Hg; c) with an increase in the generator power. In the case studied here the electron temperature was $6000-8000^{\circ}\text{K}$; 2) the concentration of the atomic ions and the power consumed during the discharge are a nonmonotonic function of pressure. With lacking external magnetic field and also with a longitudinal magnetic field they have a maximum at pressures of about $3 \cdot 10^{-2}$ mm Hg. The application of a transverse magnetic field considerably increases the density of the atomic ions and the power required for the discharge whose maxima are shifted toward lower pressures (15 to $18 \cdot 10^{-3}$ mm Hg). On the conditions described the degree of ionization of the source was low; it amounted to less than one thousandth %. With ordinary conditions of operation of the source the degree of ionization was by one order of magnitude higher. Also the proton content in the ion beam is a nonmonotonic function of pressure, X

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Study of a high-frequency...

S/057/61/031/003/009/019
B125/B202

where the maximum lies at about $25 \cdot 10^{-3}$ mm Hg. The optimum gas pressure at which the current of atomic ions is the strongest is always lower than that pressure at which the concentration of the atomic ions has a maximum in the discharge. There are 7 figures, 1 table, and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. X

SUBMITTED: May 30, 1960

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Legend to Fig. 1: 1 - to the high-frequency generator, 2 - water,
3 - measurement of vacuum, 4 - to the spectrometer, 5 - hydrogen,
6 - pumping out, 7 - kv.

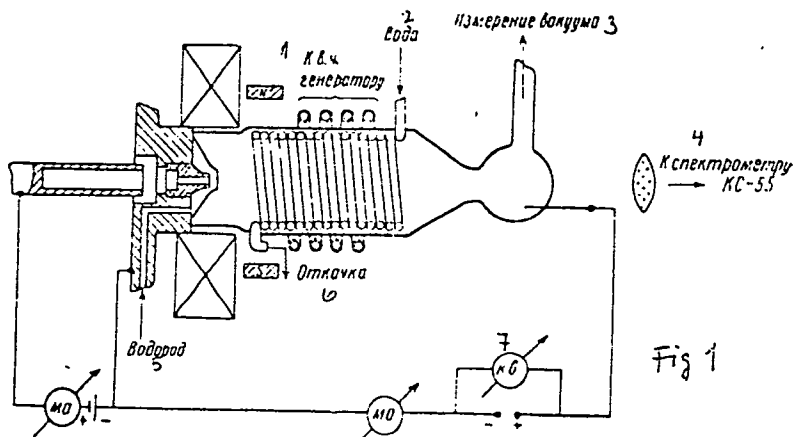


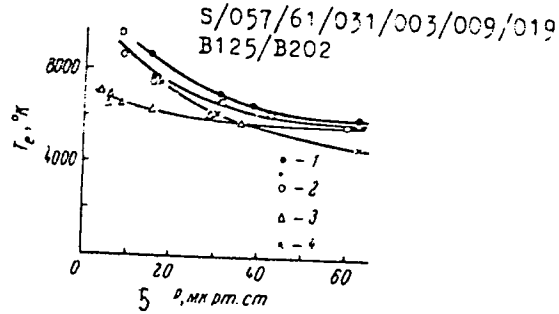
Fig 1

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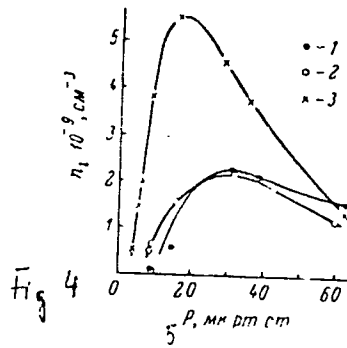
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Study of a high-frequency...

Legend to Fig. 3: dependence of the electron temperature on the hydrogen pressure in the discharge chamber. $5 - P$ in 10^{-3} mm Hg
 $W_r = 160$ w (1 - without field, 2 - with longitudinal field, 3 - with transverse field);
 $W_r = 294$ w (4 - without field).



Legend to Fig. 4: dependence of concentration of the atomic ions on the gas pressure. The curves are given the same designations as in Fig. 3.

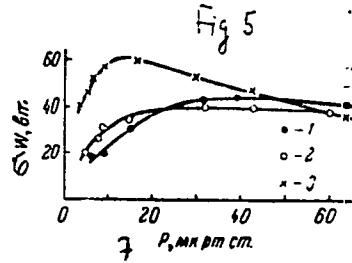


Card 6/8

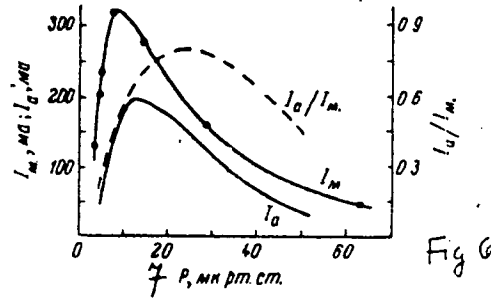
Study of a high-frequency....

Legend to Fig. 5: dependence of the power at the lateral wall of the discharge chamber on gas pressure. The designations are the same as used in Fig. 4. 6 - W, in w, 7 - P in 10⁻³ mm Hg.

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B125/B202



Legend to Fig. 6: Measurement of the total flux of hydrogen ions and of the proton flux as a function of gas pressure when applying a transverse magnetic field.



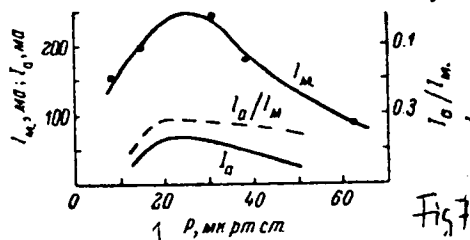
Card 7/8

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B125/B202

Study of a high-frequency...

Legend to Fig. 7: measurement of the total flux of hydrogen ions and of the proton flux as a function of the gas pressure with lacking external magnetic field.



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20929

S/057/61/031/003/013/019
B125/B209

26.1420

AUTHOR: Petrov, V. I.

TITLE: Some peculiarities of an ion beam from a h-f source

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 3, 1961, 348-351

TEXT: The author studied the conditions for the passage of a hydrogen-ion current of about 7 ma through the channel of a probe. The capacity of the ion beam on leaving the source was examined, as well as the percentage of fast neutral particles and H_1^+ , H_2^+ , and H_3^+ ions in the beam. Fig. 1 shows the h-f source used in these investigations. The h-f annular discharge was excited by a generator of 25 Mc/sec in a constant transverse magnetic field. The repulsive effect of the space charge of the beam played a considerable part when a sufficiently strong ion current passed through the channel of the probe. Therefore, part of the ions of the beam are lost in the long channel and settle at the walls. The measurement of the extracted ion current I_M and of the current consumed by the rectifier of the extracting voltage is schematically shown in Fig. 1. The results of these

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Some peculiarities of an...

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measurements are shown in Fig. 2. The same figure also contains the theoretical curve of the hydrogen consumption Q as a function of the channel length. If $l > 10$ mm, I_V increases considerably whereas the ion current I_M decreases. I_M and Q decrease by about 35% when l increases from 10 to 15 mm. For $l > 15$ mm, I_M decreases considerably faster than Q , and I_V increases substantially. At $l < 10$ mm, Q rises quickly whereas I_M and I_V remain practically unchanged. The optimum ratio of (l/a) (channel length/diameter) varies from 3 to 4.5. On the basis of these results, the author chose two varieties of probes with 15 and 20 mm long channels; Fig. 3 shows the ion fluxes emerging from the source as a function of the extracting voltage for both probes. Besides, the experimental points on this curve coincide quite well with the curve given by the $2/3$ law. The author measured the distribution of the ion-current density over the beam cross section by means of displaced graphs, in order to determine the aperture angle of the ion beam emerging from the source. Measurements for two probes were made (channel length 10 and 15 mm; ion currents 10 and 7 ma). The distribution of the current density as a function of the half

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aperture (angle through which the ion path deviates from the axis) is shown in Fig. 4. The ion beam emerging from the h-f proton source contains a certain fraction of molecular ions H_2^+ and H_3^+ , as well as many fast neutral particles, and a small amount of negative ions. The mass spectrum of positive ions in the beam was measured in a 200-kv linear accelerator by means of an analyzing electromagnet. At a total current of the accelerated hydrogen ions of 5 ma, the beam consisted of the following components: H_1^+ - 4.3 ma (86%), H_2^+ - 0.4 ma (8%), H_3^+ - 0.3 ma (6%). The fast neutral particles are formed by charge exchange of the extracted ions when passing through the region of the neutral gas in front of the probe and in the channel of the probe. The fast neutral particles are of interest from the viewpoint of obtaining negative ions from an ion source of a given type. The content in fast neutral particles in the beam was determined from the difference in the capacity developed the target by neutral and charged particles of the beam on the one hand, and by ions only on the other. Under the working conditions considered in the present case, the ion beam emerging from the h-f proton source contains about 25% of fast neutral particles. The author thanks O. V. Soptsov for his assistance in the

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Some peculiarities of an...

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B125/B209

measurements. There are 4 figures and 3 references: 2 Soviet-bloc and
1 non-Soviet-bloc. The reference to the English-language publication
reads as follows: H. P. Eubank, R. A. Peck, R. Truell, RSI, 25, 989, 1954. ✓

SUBMITTED: May 30, 1960

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B125/B209

Some peculiarities of an...

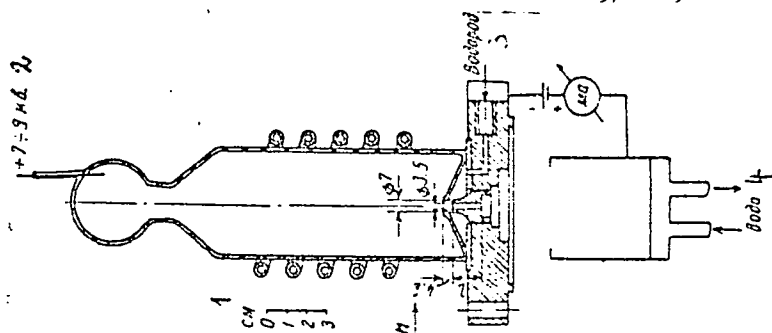


Fig. 1

Legend to Fig. 1: Structure of the source and scheme of the experiment.
1 - cm, 2 - kv, 3 - hydrogen, 4 - water.

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