

S/030/62/000/010/007/007  
D204/D307

AUTHOR: Filippov, M. V.

TITLE: The problems of theoretical and applied magneto-hydrodynamics (MHD)

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 10, 1962, 112-113

TEXT: A summary is given of the 3rd conference organized in Riga by the Institut fiziki Akademii nauk Latvyskoy SSR (Institute of Physics of the Academy of Sciences, Latvian SSR), during the period of July 2 - 7, 1962. Over 400 participants were present to discuss the progress in MHD achieved since the last meeting in 1960. In the sessions devoted to the hydrodynamics of Reynolds' numbers  $\gg 1$ , numerous lectures on the dynamics and physics of plasma, MHD waves, MHD of outer space and MHD calculations, were given and discussed. In the next part of the conference small magnetic Reynolds' numbers were considered, and the discussions were concerned with the MHD of conducting liquids, the boundary layer, dynamic flow and the effect of magnetic fields on the manner of flow through chan-

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The problems of theoretical ...

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nels. Applied MHD were discussed separately, particularly the theory, construction and exploitation of induction and conduction electromagnetic pumps. Further discussions were concerned with MHD generators and with the action of a magnetic field on suspended bodies and conglomerates.



Card 2/2

FILIPPOV, M. V.

Dissertation defended for the degree of Candidate of Technical Sciences  
at the Institute of Earth Physics imeno O. Yu. Shmidt in 1962:

"Suspended Layer of Ferromagnetic Particles in a Magnetic Field and  
Prospects for Its Use in Beneficiation of Minerals."

Vest. Akad. Nauk SSSR, No. 4, Moscow, 1963, pages 119-145

FILIPPOV, M.V., kand. tekhn. nauk, otv. red.; KIRKO, I.M., doktor  
fiz.-mat. nauk, red.; BIRZVALK, Yu.A. [Birzvalks, J.],  
kand. tekhn. nauk, red.; LIYELAUSIS, O.A. [Lielausis, O.],  
kand. fiz.-mat. nauk, red.; TSINOBER, A.B. [Cinobers, A.],  
red.; UKERMARKA, R.P., red.; SAVEL'YEVA, Ye., red.;  
TEYTEL'BAUM, A., red.; LEMBERGA, A., tekhn. red.

[Reports delivered at the Third Conference on Theoretical  
and Applied Magnetohydrodynamics in Riga, July 2-7, 1960]  
Doklady, pročitannye na... Riga, Izd-vo AN Latviiskoi SSR.  
Sec.3. [Problems in magnetohydrodynamics] Voprosy magnitnoi  
gidrodinamiki. 1963. 408 p. (MIRA 17:4)

1. Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy  
gidrodinamike. 3d, Riga, 1962. 2. Chlen-korrespondent  
AN Latviyskoy SSR (for Kirko).

FILIPPOV, M.V., otv. red.

[Magnetohydrodynamics] Voprosy magnitnoi gidrodinamiki;  
doklady. Riga, Izd-vo AN Latv.SSR, 1963. 408 p.

(MIRA 17:10)

1. Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy  
gidrodinamike. 3d, Riga, 1962.

ФИЛІПОВ, М.В. (Riga)

Nomographic representation of a transcendental equation. Nom. sbor. no.2:25-28 '64.

Nomogram for the approximate solution of a nonlinear differential equation of the first order. Ibid.:78-81

Use of the method of descriptive geometry of four-dimensional space in constructive alignment nomograms of functions of complex variables. Ibid.:103-109 (MIRA 18:3)

WT (A) / FWT (B) / FWA (d) / FCS (K) / LWA (L) Pd-1 68

ACCESSION NR: AT5009763

UR/0000/64/004/000-0137 01-3

Author: Philippov, M. V. (Candidate of technical sciences)

Subject: Nomenclographic determination of fluid flow velocity within tubes

... mekhanika po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d. ... magnitnoy gidrodinamiki (Problems of magnetohydrodynamics); ... meshchaniya, v. 4. Riga, Izo-vo AN Latvii, 1967

Keywords: tubular flow, fluid flow velocity, fluid velocity nomogram, magneto-hydrodynamic flow, conducting fluid flow

ABSTRACT: In experimental magnetohydrodynamics, the velocity v of conducting fluid in tubes is usually determined by means of Venturi tubes. This requires the subsequent computational use of the formula

$$v = \frac{\Omega_2 \sqrt{2g\Delta h}}{\Omega_1 \sqrt{1 - \left(\frac{\Omega_2}{\Omega_1}\right)^2}} \quad (1)$$

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ACCESSION NR: AT5009763

where  $f$  is a constant coefficient equal to 0.985,  $g$  is the acceleration due to gravity,  $h$  is the difference in the levels of the differential manometer, and  $S_1$  and  $S_2$  are the cross sections of the Venturi tube and operating tube, respectively. Repeated measurements and design calculations of the velocities of liquids for various values of  $h$  were made. Consequently, the author developed second-type nomograms for the determination of equation (1). The paper also contains a list of symbols and gives detailed instructions for the use of the nomogram. The paper contains 16 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 11Aug64

ENCL: 00

SUB CODE: ME

NO REF SERV: 003

OTHER: 000

Card 2/2





L 62011-65

ACCESSION NR: AP5014189

SUBMITTED: 00

ENCL: 00

SUB CODE: ME, EC

NO REF SOV: 000

OTHER: 000

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Card 2/2

FILIPPOV, M.V., kand. tekhn. nauk, otr. red.; KIRKO, I.M.,  
doktor fiz.-mat. nauk, red.; LIELPETER, Ya.Ya.  
[Lielpeters, J.], kand. tekhn. nauk, red.; SERMON, G.Ya.,  
red.; TEYTEL'BAUM, A., red.

[Problems of magnetohydrodynamics; reports] Voprosy mag-  
nitnoi gidrodinamiki; [doklady]. Riga, Akad. nauk Lat-  
viiskoi SSR, Vol. 4. 1964. 143 p. (MIRA 18:12)

1. Soveshchaniye po teoreticheskoj i prikladnoj magnetnoy  
gidrodinamike, 3d. Riga, 1962.

FILIPPOV, N.

Metalworkers' inspection for an increase in labor productivity.  
Sov.profsoiuzy 6 no.18:29-30 D '58. (MIRA 12:2)

1. Starshiy instruktor otдела truda i zarplaty Chelyabinskogo oblsoprofa.  
(Magnitogorsk--Metallurgical plants) (Efficiency, Industrial)

FILIPPOV, N., inz.

"Control of the quality of broken stone, gravel, and sand for construction works" by B. J. Ramzes [Ramzes, B. Ya.], M. L. Nisnevic [Nisnevich, M.L.]. Reviewed by N. Filippov. Stavivo 42 no. 3:117-118 Mr '64.

FILIPPOV, N., inz.

"The new in the technology and methods of cement production."  
Reviewed by N. Filippov. Stavivo 42 no.9:356 S '64.

FILIPPOV, Nikolaj, inz.

New concrete mixtures, winners of Soviet competition. Inz stavby  
10 no. 2:70-71. F. '62.

FILIPPOV, N. A.

"Combating the Colorado Potato Beetle by Treating the Soil with Hexachlorocyclohexane and Other Chemical Preparations." (Dissertation for Degree of Candidate for Agricultural Sciences.) Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev, Moscow, 1955

SO: M-1036 28 Mar 56



DEVYATISIL'NAYA, F.I., agronom po zashchite rasteniy (Perehchepinskiy rayon, Dnepropetrovskoy oblasti); FILIPPOV, N.A.

On demonstration farms. Zashch. rast. ot vred. i bol. 7 no.1:36  
'62. (MIRA 15:6)

1. Zaveduyushchiy otdelom zashchity rasteniy Moldavskogo instituta oroshayemogo zemledeliya i ovoshchevodstva, Tiraspol', Moldavskoy SSR (for Filippov).  
(Plants, Protection of)

FILIPPOV, N.A., kand.sel'skokhoz.nauk

European cabbage moth (*Barathra brassicae*). Zashch. rast. ot vred.  
i bol. 8 no.8:41-42 Ag '63. (MIRA 16:10)

1. Institut oroshayemogo zemledeniya i ovoshchevodstva, Tiraspol'.  
Moldavskaya SSR.

**AUTHOR:** Rzhavskiy, Ye.L; Sukhodol'skiy, I.O.; and Filippov, N.A. Sov/93-58-7-14/17  
**TITLE:** Methods for Greater Mechanization of Storage Tank Cleaning Operations  
(Pribi uvelicheniya mekhanizatsii zachistnykh rabot v rezervuarakh)  
**PERIODICAL:** Neftyanoye khozyaystvo, 1958, Nr 7, pp. 64-66 (USSR)

**ABSTRACT:** The article states that the GOST specifications for vertical steel storage tanks do not provide any standards for rapid tank cleaning systems. Therefore, tank farm operators often employ cleaning methods which endanger the safety of the tanks and workers and violate the fire regulations. The authors present three nonstandard cleaning systems which are generally used without ill effects (Figs. 1-3). They also present a new tank cleaning system with safety locks on the nozzle (Figs. 4-5). The editor invites designers and petroleum workers to communicate their views on the subject of selecting the best tank cleaning system. There are 5 figures.

Card 1/1 1. Storage tanks--Cleaning

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A105/A129

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AUTHORS: Dzhagatspanyan, R. V., Zetkin, V. I., Filippov, M. T.

TITLE: A study of the radiation addition of silicochloroform to certain olefines

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleeva, v. 6, no. 2, 1961, 231 - 232

TEXT: The authors refer to the reaction of addition of hydridesolanes at the multiple bonds of organic compounds as being the most promising process for the production of various silicon-organic monomers of high purity. The present article deals with an investigation of the addition of trichlorosilane to nonene-1 and cyclohexene under the action of  $\gamma$  - radiation at two dose rates (70 r/sec and 123 r/sec), 25 and 70°C and a molar ratio of the reagents of 1:1.  $Co^{60}$  was the radiation source having an activity of 1,400 g-equiv. of radium. The reaction products were decomposed by fractional distillation. The formed compounds were identified by the chlorine content and the determination of carbon and hydrogen could be carried out by transforming the halidesilanes into the corresponding alkoxy-derivatives. Tables 1 and 2 show the results of the in-

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SMORODINTSEV, A.A.; BUROV, S.A.; DOKUCHAYEV, G.M.; MINCHEV, P.N.;  
FILIPPOV, N.A.; CHALKINA, O.M.

Influence of the number of vaccinations on the epidemiological  
effectiveness of live influenza vaccine. Vop. virus. 8 no.3:  
286-291 My-Je'63. (MIRA 16:10)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.  
(INFLUENZA--PREVENTIVE INOCULATION)

SMIRNOV, N.A., prof.; DAVIDSON, M.G.; PORADNYA, A.I.; STABNIKOV,  
V.N.; VEBER, M.A.; ZHADOVICH, V.K.; KRUPSKIY, A.S. [deceased];  
MELAMEDOV, N.K.; SERGEYEV, V.V.: Primalni uchastiye:  
AMMOSEV, N.G., inzh.; AKIMOVA, L.D., kand. tekhn. nauk,  
dots.; FILIPPOV, N.A., inzh., nauchn. red.; SMIRNOV, N.A.,  
prof., red.; DNEPROVA, N.N., red. izd-va; PUL'KINA, Ye.A.,  
tekhn. red.

[Technology of building] Tekhnologiya stroitel'nogo proiz-  
vodstva. [By] N.A. Smirnov i dr. Leningrad, Gosstroizdat,  
1963. 435 p. (MIRA 17:2)

KONSTANTINOV, I.A.; KONSTANTINOV, V.I.; FILIPPOV, N.A., inzh.,  
nauchn. red.; VORONETSKAYA, L.V., red.izd-va;  
CHERKASSKAYA, F.T., tekhn. red.

[Practical methods and examples of designing railroad  
structures] Prakticheskie metody i primery rascheta zhe-  
lezobetonnykh konstruktsii. Leningrad, Gosstrolizdat,  
1963. 340 p. (MIRA 17:2)

FILIPPOV, N.A.

FILIPPOV, N.A.

Interference-protected type of packaged codes. Trudy Inst. vod.  
khoz. i energ. AN Kir. SSR no.4:247-248 '57. (MIRA 10:12)  
(Remote control)  
(Pulse techniques (Electronics))



*Filippov, N.A.*  
FILIPPOV, N.A.

~~Two series of single-impulse codes. Trudy Inst. vod. khaz. 1~~  
energ. AN Kir. SSR no.4:249-251 '57. (MIRA 10:12)  
(Remote control) (Pulse techniques (Electronics))

8(0)

SOV/112-59-4-7643

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 171 (USSR)

AUTHOR: Filippov, N. A.

TITLE: Combination Abilities of Multi-Quality Pulses and New Elements of Selective Switching in a Remote-Control System

PERIODICAL: Izv. AS Kirgizskaya SSR, 1958, Nr 5, pp 65-78

ABSTRACT: The possibility is considered of forming AC pulse combinations that would differ in phase, frequency, duration, first and last half-cycle polarities, and, finally, in the ratio of the amplitudes of opposite-polarity half-cycles. The following information is offered: an estimation of the total number of combinations, a method for selecting such combinations that are proof against distortions arising in two adjacent pulses (having the same pulse sign), a method for selecting self-correcting combinations that are proof against degeneration of one pulse into the adjacent one. The schemes of encoders and decoders developed by the author for each above pulse characteristic are described.

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SOV/112-59-4-7643

Combination Abilities of Multi-Quality Pulses and New Elements of Selective . . . . .

The schemes include seal-in relays, rectific. devices, and capacitors. Also, the schemes of encoders and decoders are reported; they include the same components and are intended for carrier pulses modulated with various audio frequencies that have definite amplitudes, durations, and polarities of the first and last half-cycles. Twelve illustrations. Bibliography: 5 items.

G.G.B.

Card 2/2

FILIPPOV, N.A.

Graphical method of time analysis of the operation of switching  
circuits. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 1 no. 4:47-51  
'59. (MIRA 14:4)

(Switching theory)

FILIPPOV, N. A., Candidate Tech Sci (diss) --- "Investigation of multi-quality impulses in remote-control signals". Frunze, 1959. 17 pp (Acad Sci Kirgiz SSR, Inst of Power Engineering and Water Economy), 150 copies (KL, No 24, 1959, 142)

FILIPPOV N.A

PHASE I BOOK EXPLOITATION SOW/3618

Academiya nauk Kirgizskoy SSR

Izvestiya. Seriya yestestvennykh i tekhnicheskikh nauk, tom 2, vyp. 1 (Mes. Sbornik of Nature and Technical Sciences, Vol 1, No. 1) Frunze, 1959. 164 p. 500 copies printed.

Ed.: P.T. Esimbir; Tech. Ed.: M.O. Anokhina.

PURPOSE: This book is intended for research scientists and teachers in institutes of higher education who may be interested in developments and research trends in various scientific fields.

COVERAGE: The book contains 12 articles by persons affiliated with the Academy of Sciences Kirgiz SSR on studies in physical chemistry, industrial chemistry, applied physics (blasting dynamics), electric power engineering, electronics, geophysics, geology, metallurgy, mathematics, and biology. The book contains 107 publications of the Academy includes works on biology, archeology, economics, linguistics, literature, geology, biological sciences (botany, zoology, medicine), and technology. 80 personalities are mentioned. References accompany most of the articles.

Armutshesova, G.R., M.P. Shulzhina, and Z.A. Makimovskaya. Turbidimetric Determination of Pectins 43

Zacharov, K.F. Determination of the Saturation Coefficient of Feed Molasses 53

Danilov, P.S., and M.K. Jermatshkina. Effect of the Weight of an Explosive Charge on the Scattering Speed of Ground Particles During Blasting 57

Lebedev, M.M. Electric Power Systems in High Mountainous Regions 69

Filippov, N.A. Methods of Transformation of Time Functions With Time 85

Sakalo, V.Ya. Indices of Moisture Adequacy in Kirgiz Pasture Lands 95

Boyko, V.M., M.A. Ismailiyeva, A.V. Poltavskiy, and Yu.S. Terminskiy. X-ray Study of the Thermal Effect on Steel Samples Hardened After Surface Heating by High-Frequency Current 111

Konruk, M.M., A.V. Poltavskiy, and Yu.S. Terminskiy. X-Ray Study of Fragmentation and Grain Correlations in Steel During Torsion 123

Ismailiyev, M. General Boundary Value Problem for a Nonlinear Integrodifferential Equation With Small Parameter at the Highest Derivative 129

Evman, L.M., and M.M. Guragimova. Bibliography of Publications of the Kirgiz SSR Academy of Sciences in 1957 165

AVAILABLE: Library of Congress (Q 60.A516A2) 17

FILIPPOV, N.A.

Effectiveness and distortability of multicomponent impulses in  
remote control. Trudy Inst.vod.khoz.i energ. AN Kir.SSR no.5:  
149-158 '59. (MIRA 13:5)

(Remote control)

FILIPPOV, N.A.

Comparative complexity of the mechanical reproduction of various  
numbers. Izv.AN Kir.SSR.Ser.est.i tekhnauk 3 no.6:75-81 '61.  
(Numeration) (Remote control) (MIRA 15:11)



S/103/62/023/012/010/013  
D201/D308

16.8000

**AUTHOR:** Filippov, N.A. (Frunze)

**TITLE:** The interdependence between the complexity of the signal and the equipment in remote control systems

**PERIODICAL:** Avtomatika i telemekhanika, v. 23, no. 12, 1962, 1680 - 1685

**TEXT:** The author attempts to analyze the complexity of an installation, as required for the production and detection of remote control signals in the form of consecutive pulses, when an installation for separating them in time is required. The analysis is carried out by comparing the complexity of equipment required for equal signal systems, formed by either single- or multiple-parameter signals. It is shown that in cases when the capacity of the remote control installation exceeds 32 commands, it is of advantage, from the point of view of simplicity of installation, to use composite-parameter pulse signals: this agrees

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The interdependence ...

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with the results obtained by M.A. Gavrilov. The use of composite signals should, however, be followed by checking the reliability of the operation with a given type of signal. There are 2 figures and 2 tables.

VB

SUBMITTED: March 5, 1962

Card 2/2

L 04903-67 - EWT(1) GD

ACC NR: AT6028703

SOURCE CODE: UR/0000/66/000/000/0003/0006

AUTHOR: Neholyubov, Yu. Ye.; Filippov, N. A.; Sukhotin, V. S.; Veys, L. D.

ORG: none

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BT1

TITLE: Programmed time relay using contactless elements

SOURCE: AN KirgSSR, Institut avtomatiki, Uzly i ustroystva diskretenogo deystviya (Digital elements and devices). Frunze, Izd-vo Ilim, 1966, 3-6

TOPIC TAGS: time relay, circuit design, time switch

ABSTRACT: The authors describe a programmed time relay with an output giving 20 different time periods, each from 5 to 100 sec long, and set by the operator by means of a switch. The device uses magnetic elements with square-wave hysteresis loops, a binary scaling circuit permitting reduction of the number of elements in the whole circuit, and series scalars of the shift register type. The programmed time relay consists of a master pulse generator, binary scaler (9 locations), two-clock pulse conversion rule, 20 coding rings, two-clock pulse coder register, 20 switches, output relay, and buttons and switches for controlling and starting the time relay. Multivibrator stability determines time period stability. The 20 switches insert a predetermined program for emitting time periods. The length of the n-th period is set by

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L 04903-67

ACC NR: AT6028703

the corresponding n-th switch. Orig. art. has: 1 formula and 1 figure.

SUB CODE: 09/ SUBM DATE: 22Feb66/ ORIG REF: 001

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L 04904-67 EWT(d)/EWP(1) IJP(c) GG/BB/GD

ACC NR: AT6028704

SOURCE CODE: UR/0000/66/000/000/0007/0013

AUTHOR: Filippov, N. A.; Tonkikh, S. A.

ORG: none

TITLE: A device for rounding off binary numbers 160

SOURCE: AN KirgSSR. Institut avtomatiki. Uzly i ustroystva diskretnogo deystviya (Digital elements and devices). Frunze, Izd-vo Ilim, 1966, 7-13

TOPIC TAGS: circuit design, binary number, computer coding

ABSTRACT: Telemetry and computer technology sometimes round off large (multi-digit) numbers in order to store and transmit them, i.e., only a few (n) of the more significant digits beginning with the first are recorded or sent, while the remaining (p) digits are replaced by zeros, and only the number of them is recorded. In this process the number (n) of significant digits used determines the exactness of the recorded number. The article describes a device using magnetic elements with a rectangular hysteresis loop which uses less than usual amounts of pulsed current alone. The aspects treated are: a block diagram of a complete rounding-off circuit, the individual location, a dynamic valve, a scaling circuit, a blocking oscillator, and the operation of the whole device. The number of zeros in the rounded-off number (m) is

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BT1

L 04904-57

ACC NR: AT6028704

connected with the number of zero-digit locations (p) by the relation  $2^m = p$ . The range of rounded numbers runs from 0 to  $2^{p+n}$  (n = number rounded off). The structure of this device may be easily changed by adding new binary locations one or several at a time to the locations for the rounded-off number; this increment may be constant or variable. Compression of the initial number increases as counting elements (for the number of zeros) increases in each step and accuracy in reproducing the compressed number is sacrificed. The numbers must be transposed into the numerical system desired, i.e., binary or decimal. Orig. art. has: 2 figures.

SUB CODE: 09/ SUBM DATE: 22Feb66/ ORIG REF: 001/ OTH REF: 001

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Card 2/2

L 04902-67 EWT(d)/EWP(1) IJP(c) GG/BB/GD

ACC NR: AT6028705

SOURCE CODE: UR/0000/66/000/000/0028/0032

AUTHOR: Nebolyubov, Yu. Ye.; Filippov, N. A.; Shvayko, N. V.

ORG: none

TITLE: A voltage-controlled pyramidal decoder 160

SOURCE: AN KirgSSR, Institut avtomatiki. Uzly i ustroystva diskretnogo deystviya (Digital elements and devices). Frunze, Izd-vo Ilim, 1966, 28-32

TOPIC TAGS: digital decoder, circuit design, digital analog converter

ABSTRACT: This decoder converts (decodes) an n-place  $N^i$ -th number successively in time, beginning with the most significant and ending with the least significant digit, into a single-digit number having a certain number of signs. Decoder configuration is thus a tree of a certain degree of complexity, in which each branching (selection) node, including the first, has a number of branches which equals the number of signs in the given digital place. The speed of response of this decoder and the amount of current which it can deliver to the final control element, as well as the minimum current needed for switching the diodes of all degrees of selection, not including the last, are determined by the type of switching diode used in the circuit. This decoder may be used both with the unipolar circuit described in the article and

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with a dipolar one. In the latter case the number of switching diodes and resistors in the firing circuits is reduced almost by half. This decoder may be partially used in conjunction with other types of contactless decoders of both pulse and voltage types. In this case the switching diodes and the methods of turning them on may be used in several selection stages, but preferably in just the final one. Operation of two circuits is described in detail. Orig. art. has: 6 formulas and 2 figures.

SUB CODE: 09/ SUBM DATE: 22Feb66/ ORIG REF: 002

*ms*  
Card 2/2



PILIPPOV, N.A.; GORDIN, I.M., inzhener, redaktor.

[Bricklaying by a 4-man team] Kirpichnaya kladka zvenom-chetverkol.  
Leningrad, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953, 41 p.  
(MLRA 7:6)

(Bricklaying)

ROZENBLIT, Ya.I., inshener; FILIPPOV, N.A.

Form for the manufacture of reinforced concrete staircase flights.  
Rats.i izobr.predl.v stroi. no.55:14-17 '53. (MIRA 7:3)  
(Stair building) (Precast concrete construction)

FILIPPOV, Nikolay Aleksandrovich, kamenshchik-novator; KARPOV, V.V.,  
kandidat tekhnicheskikh nauk, nauchnyy redaktor; KAPLAN, M.Ya.,  
redaktor izdatel'stva; PUL'KIHA, Ye.A., tekhnicheskiy redaktor

[Mixed team in construction of large block foundations] Kompleksnaya  
brigada na montazhe krupnoblochnykh fundamentov. Leningrad, Gos.  
izd-vo lit-ry po stoit. i arkhitekture, 1956. 21 p. (MIRA 9:9)  
(Foundations)

FILIPPOV, N.

Calculation of a prestressed concrete roadway. Tr. from the Russian.

p. 558 (Inzenyrskie Stavby) Vol. 5, no. 10, Oct. 1957, Praha, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

FILIPPOV, N.

Concrete reinforced with glass fibers. Tr. from the Russian.

p. 608 (INZENYRSKE STAVBY) Vol. 5, no. 11, Nov. 1957,  
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,  
March 1958

FILIPPOV, N.

TECHNOLOGY

periodicals: INSENYRSKE STAVBY Vol. 6, no. 11, Nov. 1958

FILIPPOV, N. A new technology of concrete mixing. Tr. from the Russian. p. 602.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5,  
May 1959, Unclass.

MONOSZON, Abram Isaakovich, kand. tekhn. nauk; DOVZHNIK, G.A., retsenzent;  
TSALALIKHIN, M.S., retsenzent; FILIPPOV, N.A., inzh., nauchnyy  
red.; BESPALOV, I.V., red. izd-va; PUL'KINA, Ye.A., tekhn.  
red.

[Wide-span, precast, prestressed, reinforced concrete galleries]  
Bol'sheproletnyye sbornyye predvaritel'no napriazhenyye zhelezo-  
betonnyye galerei. Leningrad, Gos. izd-vo lit-ry po stroit.,  
arkhit. i stroit. materialam, 1962. 250 p. (MIRA 15:4)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva (for Dovzhnik).
2. Gosudarstvennyy proyektnyy institut stroitel'noy promyshlennosti (for TSalalikhin).  
(Reinforced concrete construction)  
(Prestressed concrete construction)

SMORODINTSEV, A.A.; DOKUCHAYEV, G.I.; MINICHEV, P.N.; FILIPPOV, N.A.;  
CHALKINA, O.M.

Epidemiological effectiveness of live influenza vaccine during  
A2 and B influenza outbreaks in 1962. Vop. virus. 10 no.4:476-  
482 J1-Ag '65. (MIHA 18:8)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.



FILIPPOV, N.A., kand. sel'skokhoz. nauk

Mole cricket. Zashch. rast. ot vred. i bol. 9 no.2:34-36  
'64. (MIRA 17:6)

1. Moldavskiy institut oroshayemogo zemledeliya i ovoshchevodstva,  
Tirapol'.

FILIPPOV, N.A.; KONSTANTINOV, I.A.

[Examples of the calculation and design of wooden elements; a practical manual for designers] Primery rascheta i proektirovaniia derevliannykh konstruktsii; prakticheskoe posobie dlia proektirovshchikov. Leningrad, Stroiizdat, 1965. 300 p. (MIRA 18:12)

FILIPPOV, N.A.; GOROKHOVA, G.P.

Electromechanical devices for establishing discrete position  
of the angle of rotation. Izv. tekhn. no.10:46-47 0 '65.  
(MIRA 18:12)

SMORODINTSEV, A.A.; DOKUCHAYEV, G.I.; MINICHEV, P.N.; FILIPPOV<sup>1</sup>, N.A.  
CHALKINA, O.M.

Epidemiological effectiveness of live vaccine against influenza  
during the outbreak of influenza A2 and B in 1962. Zhur.  
mikrobiol., epid. i immun. 42 no.10:54-61 0 '65.

(MIRA 18:11)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.  
Submitted June 10, 1964.

MASLOV, V.I., inzh.; FILIPPOV, N.D., inzh.

Special features in the flow of blast furnace gas. Prom. energ.  
19 no.1:29-33 Ja '64. (MIRA 17:2)

USSR/Engineering

Mechanization  
Furnaces, Blast

NOV 48

"Industrialization and Mechanization of Construction at Zaporog," N. G. Filippov, Engg, 5 pp.

"Mash Trud i Tyazh Rabot" No 11

Zaporog Industrial Enterprise, one of largest in USSR, is being repaired after having been damaged by the Germans. Lists projects for 1947 and 1948. One of the largest jobs for 1948 is reconstruction of blast furnace unit No 4. Describes various

53/49741

USSR/Engineering

(Contd)

NOV 48

Industrial features and mechanization used in the reconstruction program. Photographs show parts of the enterprise.

FILIPPOV, N. G.

53/49741  
53/49741

CHERNOMORSKIY, M.N.; FILIPPOV, N.G.

"Fundamentals of the history of technics; development of theoretical and methodological problems" by S.V. Shukhardin. Reviewed by M.N. Chernomorskii, N.G. Filippov. Vest. AN SSSR 32 no.3:134-136 Mr '62.  
(MIRA 15:2)

1. Istoriko-arkhivnyy institut.  
(Technology)  
(Shukhardin, S.V.)

L 24372-66 ENT(1)/ENT(m)/EPF(n)-2 KJF(c) JD/JG

ACC NR: AP6010437

SOURCE CODE: UR/0386/66/003/005/0212/0216

AUTHOR: Sklyarevskiy, V. V.; Lukashevich, I. I.; Romanov, V. P.; Filippov, N. I.;  
 Venevtsev, Yu. N.; Viskov, A. S.

ORG: none

TITLE: Mossbauer effect in the ferroelectric  $Pb(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ 

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.  
 Prilozheniye, v. 3, no. 5, 1966, 212-216

TOPIC TAGS: ferroelectric material, Mossbauer spectrum, multiplet splitting, critical  
 point, phase transition, Curie point, electron spin

ABSTRACT: The purpose of the investigation was to check on the presence of a minimum  
 of the probability of the Mossbauer effect on  $\text{Sn}^{119}$  in the investigated compound,  
 similar to that observed for  $\text{Ba}(\text{TiSn})\text{O}_5$  (with different Ti/Sn ratios) by V. A. Bokov  
 et al. (PTF v. 7, 1886, 1965 and elsewhere). It was also desired to check on other  
 singularities in the behavior of the quadrupole splitting and of the position of the  
 symmetry center of the Mossbauer spectrum observed near the temperature  $T_c$  of the  
 ferroelectric phase transition. To this end, the authors investigated the variation  
 of the parameter of the Mossbauer absorption spectrum of  $\text{Fe}^{57}$  nuclei of the ferro-  
 electric in question at the phase transition temperature ( $T_c = 114^\circ\text{C}$ ). The absorbers  
 were made by the usual ceramic technology, using  $\text{Fe}_2^{57}\text{O}_3$  (60%  $\text{Fe}^{57}$ ). The source was  
 $\text{Co}^{57}$  in stainless steel. The apparatus for the Mossbauer spectra is described by the  
 authors elsewhere (PTE No. 4, 43, 1964). The results confirm the existence of the

Card 1/2



L 24372-66

ACC NR: AF6010437

10

singularities in the vicinity of the Curie point  $T_c = 214^\circ\text{C}$  and a minimum in the Mossbauer-effect probability. These singularities are apparently connected with the fact that an anomalous decrease in the frequency of one of the transverse optical branches of the lattice takes place on approaching the ferroelectric transition point in crystals with perovskite structure. The decrease in the quadrupole splitting with increase of temperature to  $T_c$  is connected with a decrease in the spontaneous polarization. The asymmetry of the quadrupole-splitting line, which has a minimum near  $T_c$  and reverses sign, can be due either to anisotropy of the Mossbauer-effect probability or to relaxation of the electron spins in a ferromagnet. It is concluded that an investigation of the temperature variation of the asymmetry can give important information on the dynamics of the realignment of the crystal structure during the ferroelectric transition. The authors thank F. Ye. Chukreyev and V. I. Man'ko for the computer programming, Yu. M. Kagan, A. M. Afanas'yev, B. N. Samoilov, and B. I. Verkin for discussions, K. P. Aleshin for producing the electronic part of the Mossbauer spectrometer, I. B. Filippov for help with the experiments, and L. I. Kazakovich and E. M. Kabanova for help with the measurements. Orig. art. has: 2 figures.

SUB CODE: 20/    SUBM DATE: 17Jan66/    ORIG REF: 010/    OTH REF: 005

Card 2/2

FILIPPOV, N.I., elektromekhanik

Improved ladder for maintenance men. Avtom. tele. i svyaz'  
3 no.10:31 0 '59. (MIRA 13:2)

1. Smolenskaya distantsiya signalizatsii i svyazi Kalininskoy  
dorogi. (Ladders)

FILIPPOV, NI.I., starshiy elektromekhanik

This is hindering cable maintenance. Avtom., telem. i sviaz' 3  
no.2:39 F '59. (MIRA 12:4)

1. Smolenskaya distantsiya signalizatsii i svyazi Kalininakoy  
dorogi.

(Telephone cables--Maintenance and repair)

FILIPPOV, N.I.

Bunkerless loading of cement into lorries. Tsement 29  
no.5:19-20 S-0 '63. (MIRA 16:11)

1. Magnitogorskiy tsementnyy zavod.

FILIPPOV, N.I., gornyy inzh.; SHNAYDER, M.F., gornyy inzh.

New variation of the system of mining with ore recovery by  
blasting. Gor. zhur. no.2:30-33 F'62. (MIRA 17:2)

1. Leninogorskiy polimetallicheskiy kombinat.

AKHMETOV, M.M.; ANOSHKIN, V.V.; DROZDOVSKIY, N.I.; VALEGZHANIN, V.V.;  
FILIPPOV, N.I.; KNYAZEV, V.L.; SMIRNOVA, A.M.

Short-delay blasting in mines of the Leninogorsk Complex Ore  
Combine. Trudy Akad. Nauk Kazakh. SSR 15:43-47 '63. (MIRA 17:3)

FILIPPOV, N.I., gornyy inzh.; SHNAYDER, M.F., gornyy inzh.

Effect of borehole deflection on the results of blasting. Gor. zhur.  
no.6:38-41 Je '64. (MIRA 17:11)

1. Leninogorskiy rudnik, g. Leninogorsk.

FILIPPOV, N. I.

L 16552-65 EWT(1)/EEC(t) Feb ESD(t)/ESD(gs)/AEDC(a)/SSD/AFWL/AS(mp)-2/  
IJP(c)  
ACCESSION HR: AP4044667 5/0120/64/000/004/0043/0049

AUTHOR: Aleshin, K. P.; Lukashevich, I. I.; Samoylov, B. N.;  
Sklyarevskiy, V. V.; Stepanov, Ye. P.; Filippov, N. I.

TITLE: System for investigating the Mossbauer effect

SOURCE: Pribery\* i tekhnika eksperimenta, no. 4, 1964, 43-49

TOPIC TAGS: Mossbauer effect, Mossbauer effect investigation, vibrator, aerodynamic vibrator, Mossbauer spectrum, gamma ray, gamma ray source

ABSTRACT: The proposed system, in which motion is produced by a special electrodynamic vibrator at a constant velocity of up to ~ 8 cm/sec, was designed for investigating the Mossbauer effect. The low amplitude of source motion (1-2 mm) makes it possible to conduct both the absorption and the dispersion measurements of the Mossbauer spectra. The electrodynamic vibrator, which is described in detail, provides for a constant velocity within  $\pm 1\%$ . The vibrator makes it possible to conduct measurements at frequencies of up to 20 cps. The maximum velocity of 8 cm/sec is achieved at 16 cps. The electronic part of the system provides for registration by means of a NaI (Tl) crystal and a photomultiplier of  $\gamma$ -quanta passing through a resonant absorber. From the photomultiplier the pulses are applied to a single-channel analyzer whose window is directed toward the photopeak of the

Card 1/2



L 16552-65

ACCESSION NR: AP4044667

Y-rays investigated. The equipment is designed so as to make it possible to change the measurement time easily and to pass from one operating frequency to another. The resolution time of the registration channel is  $\sim 1$   $\mu$ sec. The characteristics and velocity calibration of the system were studied by measuring the absorption spectrum of  $Fe^{57}$  Y-rays with an energy of 14.4 kev. The source was  $Co^{57}$ , and the absorber was  $Fe_2O_3$ . Measurements of the line drift have shown that after heating the system for 2 hr, the drift in velocity does not exceed  $\pm 0.5\%$  for 8 hr of operation. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 23Jul63

NO REF SOV: 003

ENCL: 00

OTHER: 003

SUB CODE: EM, EC, NP

Card 2/2

BUD'KO, A.V.; KRIVENKOV, N.A.; ARUTYUNOV, E.G.; IOFIN, S.I.; DRONOV, N.V.;  
FOKIN, Yu.N.; CHUGUNOV, L.F.; VERGUS, N.G.; KUTUZOV, D.S.; TEN, N.A.;  
FILIPPOV, N.I.; SHNAYDER, M.F.

Experiences in using the caving system with end drawing of ore.  
Gor. zhur. no.8:22-26 Ag '65. (MIRA 18:10)

1. Institut gornogo dela im. A.A. Skochinskogo (for Bud'ko, Krivenkov, Arutyunov).
2. Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov (for Iofin, Dronov, Fokin).
3. Tyrnyauzskiy kombinat (for Chugunov, Vergus).
4. Leninogorskiy polimetallicheskiy kombinat (for Kutuzov, Ten, Filippov, Shnayder).

TROYNIN, Mitrofan Fedorovich; USHAKOV, Nikolay Stepanovich;  
FILIPPOV, N.M., inzh., retsenzent; ROZENGAUZ, B.M., inzh.,  
retsenzent; VEREVKIN, N.S., kand. tekhn. nauk, red.;  
YEMEL'YANOVA, Ye.V., red.; SHERMUSHENKO, T.A., tekhn. red.

[Manual for electricians]Spravochnaia kniga elektromontera.  
P.d red. N.S.Verevkina. Leningrad, Lenizdat, 1962. 263 p.  
(MIRA 16:2)

(Electric power distribution--Handbooks, manuals, etc.)  
(Electric wiring--Handbooks, manuals, etc.)

1. FILIPPOV, N. N.; PYATIN, S. G., Engs.

2. USSR (600)

4. Roofs

7. Large roof panels for general use made from light concrete with Kashira slag.  
Biul. strai. tekhn. 10, No. 9, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

67474

SOV/146-2-4-19/19

~~9(1)~~ 9.1000

AUTHOR: Vorob'yev, Ye. A., Aspirant; Petrov, Ye. A.,  
Engineer; Tennison, G.G., Engineer; Filippov, N.N.,  
Senior Instructor

TITLE: An Installation for Measuring and Automatically Re-  
cording Directional Patterns of Super-High-Frequency  
Antennas,

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroye-  
niye, 1959, Nr 4, pp 152-154 (USSR)

ABSTRACT: In 1958-59, under the supervision of Senior Instructor  
N.N. Filippov, the authors developed a high-accuracy  
installation automatically recording the directional  
patterns of super-high-frequency antennas. The in-  
stallation is shown in a diagram (Figure 1) and a pho-  
tograph (Figure 2). For continuous automatic recor-  
ding, the modernized "EPP-09" automatic recorder is  
used, whose recording tape moves with a velocity of  
60 to 20 000 mm/hour. The equipment can be used to  
measure the recorded directional patterns for adjusting  
and regulating antenna test units in laboratories as

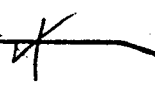
Card 1/2

67474

SOV/146-2-4-19/19

An Installation for Measuring and Automatically Recording Directional Patterns of Super-High-Frequency Antennas

well as in the open air. This article was recommended by the Kafedra radiopriyemnykh i radioperedayushchikh ustroystv (The Chair of Radio-Transmitting and Radio-Receiving Devices). There is 1 diagram, and 1 photograph.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki  
(The Leningrad Institute of Precision Mechanics and Optics). 

SUBMITTED: July 29, 1959.

Card 2/2

91800

S/058/60/000/006/027/040  
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 294, # 14918

AUTHOR: Filippov, N.N.

TITLE: <sup>25B</sup> The Field Distribution of Antennae With Rectangular Aperture in the Intermediate Zone

PERIODICAL: Nauchn. tr. Leningr. in-t tochnoy mekhan. i optiki, 1959, No. 29, pp. 70-79

TEXT: The author studies the fundamental directional operation characteristics of antennae of the most common types with rectangular aperture in the intermediate zone, basing on the Huygens-Fresnel-Kirchhoff-principle and using the known formula of the wave optics. There are considered: the sectorial H-horn, the sectorial E-horn, the pyramidal horn, the horn-lens antenna, the lens antenna, and the arbitrary rectangular aperture, in which the field amplitude is constant or varies according to the cosine law for synchronism at the aperture. Expressions are derived for calculating the electric field intensity and the directivity

B

Card 1/2

S/058/60/000/006/027/040  
A005/A001

The field Distribution of Antenna With Rectangular Aperture in the Intermediate Zone

characteristics of the antennae considered in the main planes. The method developed can be applied to investigating various antennae.

N.N. Filippov

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2



9.1800

S/058/60/000/006/028/040  
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 294, # 14919

AUTHOR: Filippov, N.N.

TITLE: The Calculation of Horn Antennae

PERIODICAL: Nauchn. tr. Leningr. in-t tochnoy mekhan. i optiki, 1959, No. 29, pp. 80-85

TEXT: The radiation theory of radiowaves is developed for horn antennae in the far zone. There are considered: the sectorial H-horn, the sectorial E-horn and the pyramidal horn antenna. The computational expressions are presented for the intensity of the electric field and the directivity characteristics in the electric and magnetic planes. The results obtained may be applied to designing various antenna units. ✓ B

N.N. Filippov

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

FILIPPOV, N.N. (Moskva)

Characteristics of aberrant variations in the pattern of elytra in  
coleopterans. Zool. zhur. 40 no.3:372-385 Mr '61. (MIRA 14:3)  
(Beetles) (Wings)

FILIPPOV, Nikolay Pavlovich

[Safety manual for fitters and assemblers of control devices] Pamiatka po tekhnike bezopasnosti dlia slesaria-montazhnika kontrol'nykh priborov. Moskva, Stroizdat, 1965. 23 p. (MIRA 18:10)

Philippine, NV

430

*Filippov, N.V.*

Category : USSR/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6073

Author : Artsinovich, L.A., Andrienov, A.M., Bazilevskaya, O.A.  
Frokhov, Yu.G., Filippov, N.V.

Title : Investigation of Pulse Discharges with High Currents

Orig Pub : Atom. energiya, 1956, No 3, 76-80

Abstract : A brief report on the results of an experimental investigation of high-power pulse discharges with high rates of current rise. A study was made of the pulse discharges in H<sub>2</sub>, D<sub>2</sub>, He, Ar, and Xe at initial gas pressures from 0.005 mm Hg to several millimeters. The maximum current in the discharge was 10<sup>7</sup> to 10<sup>6</sup> amp. The discharge was fed with a voltage from 20 to 50 kv from a capacitor bank ranging in rating from several tens to 400 microfarad. The rate of current rise in the initial discharge phase was  $3 \times 10^2$  -  $1.5 \times 10^{11}$  amp/sec, and the duration of the current rise from zero to maximum value was 8 -- 17 microseconds. The discharge tubes used were porcelain cylinders 60 -- 100 cm long and 20 -- 40 cm in diameter. The intensity of the magnetic field was measured at various points of the discharge, as was the gas pressure.

Card : 1/3

Category : USSR/Nuclear Physics - Nuclear Reactions

G-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6073

The discharge oscillograms are characterized by a sharp discontinuity in the voltage and a break in the current, occurring at a certain instant of time. A graph of the dependence of the time interval  $\tau$  prior to the first such singularity vs. the mass of gas  $M$  in the discharge tube is given for various gases ( $H_2$ ,  $D_2$ , He, Xe) over a wide range of masses (approximately  $10^{-6}$  to  $10^{-3}$  g/cm<sup>3</sup>). The resultant points fit quite well on the curve  $\tau \sim M^{1/4}$ . These data are in good agreement with the values of  $\tau$  calculated using the theory developed by M.A. Leontovich and S.A. Osovets (Abstract 6074). The singularities on the oscillograms are connected with compressions of the plasma column. The maximum speed of motion of the plasma ranged from  $1 \times 10^6$  (at high gas densities) to  $1.2 \times 10^7$  cm/sec for discharges in  $H_2$  and  $D_2$ , with an initial pressure 0.01 mm Hg. At the instant of the maximum compression, the energy of the heavy particles reaches values corresponding to a temperature of approximately  $10^6$  degrees, and the pressure in the central zone is on the order of 50 atmospheres.

Card : 2/3

CATEGORY : USSR/Nuclear Physics - Nuclear Reactions

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6075

Author : Artsimovich, L.A., Andrianov, A.M., Dobrokhotov, Ye.I.,  
Luk'yanov, S.Yu., Podgornyy, I.M., Sinitsyn, V.I., Filippov, N.V.

Title : Hard Radiation from Pulse Discharges.

Orig Pub : Atom. energiya, 1956, No 3, 84-87

Abstract : It was observed that high-power pulse discharges in light gases can be sources of hard radiation. In 1952 the authors detected neutron radiation accompanying pulse discharges in D<sub>2</sub>. The discharges were carried out in cylindrical tubes 20 -- 40 cm in diameter, 50 -- 100 cm long. The current reached several hundreds of kiloamperes, and its rate of rise amounted to  $5 \times 10^{10}$  --  $1.5 \times 10^{11}$  amp/sec. Silver targets were placed in paraffin blocks and scintillation counters were used to count the neutrons. In discharge tubes with porcelain walls, neutron emission is observed if the initial pressure of D<sub>2</sub> ranges from 0.01 to 0.3 mm Hg, while in tubes with metal side-walls the emission is observed up to 10 mm. At a maximum

Card : 1/2

Category : USSR/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6075

current 250 -- 300 kiloamperes and a D<sub>2</sub> pressure of approximately 0.1 mm Hg, the neutron yield is approximately  $10^7$  --  $10^8$  per discharge pulse and varies greatly from pulse to pulse. The neutron radiation is exceedingly sensitive to small impurities of foreign gases. The neutrons are emitted in brief pulses at the instant when the discharge column experiences the second compression. Synchronized oscillograms of the current and the neutron yield are given. Certain control experiments are described.

A high power pulse discharge is also a source of hard X-rays, occurring simultaneously with the neutrons and having energies up to 300 -- 400 kev. Certain possible explanation for the occurrence of hard radiations are given.

Card : 2/2



PETROV, D. P., FILIPPOV, N. V., FILIPPOVA, T. I. and KHRABROV, V. A.

"Powerful Gas Discharge in Chambers with Conducting Walls." (Work carried out in 1954 and 1957); pp. 170-181.

"The Physics of Plasmas; Problems of Controlled Thermonuclear Reactions." Vol. IV. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.  
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.

ANDRIANOV, A. M., BAZILEVSKAYA, O. A., BRAGINSKIY, S. I., BREZHNEV, B. G., PODGORNY,  
I. M., PROKHOROV, Y. G., FILIPPOV, N. V., FILIPPOVA, T. I. and KHRAKHOV, V. A.

*Nikolay Vasil'yevich*

"Experimental Investigation of High Current Pulse Discharges."

paper to be presented at 2nd UN Intl. Cong. on the peaceful uses of Atomic  
Energy, Geneva, 1 - 13 Sept 58.

FILIPPOV, N. V.

"Investigation of the Pressures in a Powerful Pulse Gase Discharge with the Help of a Piezo Electric Measuring Device." (Work carried out in 1956); pp. 231-249.

"The Physics of Plasmas; Problems of Controlled Thermonuclear Reactions." Vol. III. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.  
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.



ACCESSION NR: AT4025289

S/000/63/000/000/0021/0030

AUTHOR: Filippova, T. I.; Filippov, N. V.

TITLE: Measurement of soft x radiation from a non-cylindrical z-pinch

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 21-30

TOPIC TAGS: x-ray emission, x-ray, plasma sheath, plasma physics, plasma temperature, plasma confinement

ABSTRACT: The soft x-ray emission from a plasma ( $\lambda = 5 - 15 \text{ \AA}$ ) was measured with a pulsed installation similar to that used to investigate z-pinches. A plasma was produced in deuterium at 1 mm Hg pressure by a discharge current with a rise time  $(6 - 7) \times 10^{11} \text{ A/sec}$ , reaching a maximum of 500 kA within approximately 3  $\mu\text{sec}$ . A feature of such a discharge is the non-cylindrical collapse of the current sheath towards the axis, so that maximum plasma compression occurs near the anode. The compression focus serves as a highly localized source of hard radiation (neutrons and protons) and is simultaneously characterized by a powerful flash of continuous spectrum in both the visible and the soft x-ray regions. The radiation was measured photographically and by photoelectric means. The measurement procedure is des-

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ACCESSION NR: AT4025289

cribed in detail. Comparison of the experimental data with the calculations shows that the particle densities in the region which emits the soft x radiation is of the same order ( $n \sim 10^{19} \text{ cm}^{-3}$ ) as that measured in the visible continuum region ( $\sim 7 \times 10^{18} \text{ cm}^{-3}$ ), and that the maximum electron temperature lies in the interval 0.8 — 1.2 keV. The temperature distribution along the axis of the pinch was plotted as a function of the distance from the negative electrode by measuring the density ratios of photographs obtained behind different filters. The temperature values obtained for different density combinations agreed quite well. It is pointed out that the continuity and monotonicity of the x-ray spectrum was not verified with sufficient reliability. Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 03

SIB CODE: ME

NR REF SOV: 000

OTHER: 001

Card 2/5

ACCESSION NR: AT4025289

ENCLOSURE: 01

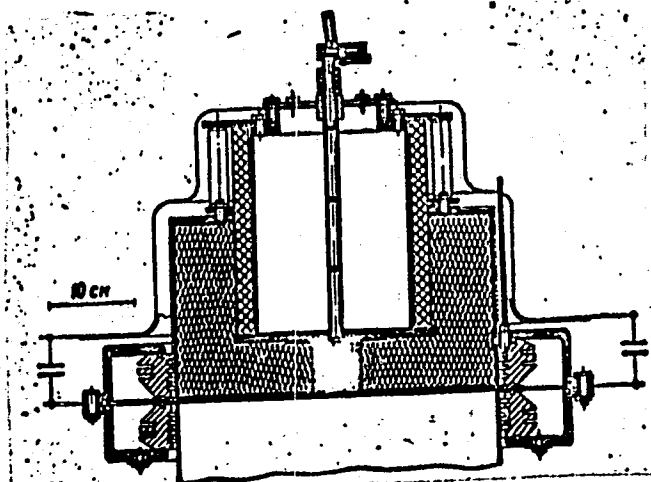
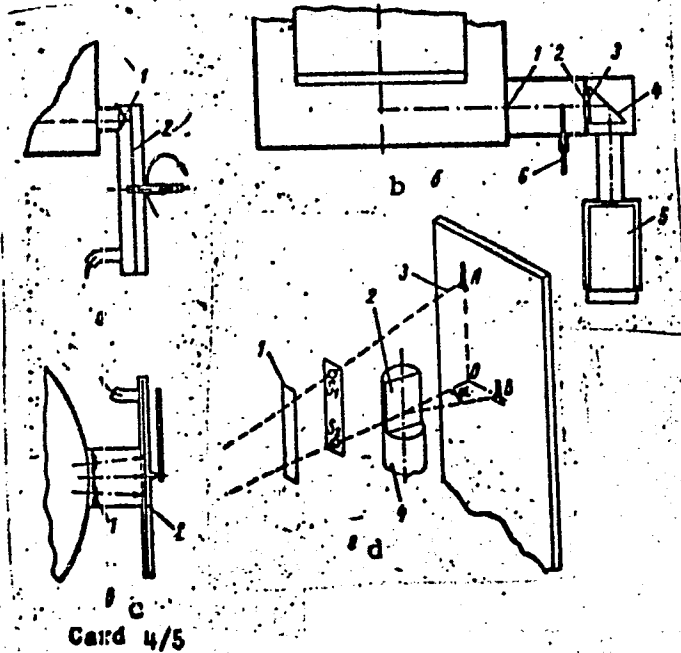


Diagram of discharge chamber

31"  
Card 3/5

ACCESSION NR: AT4025289

ENCLOSURE: 02

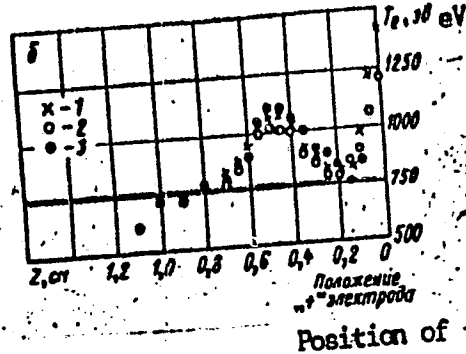
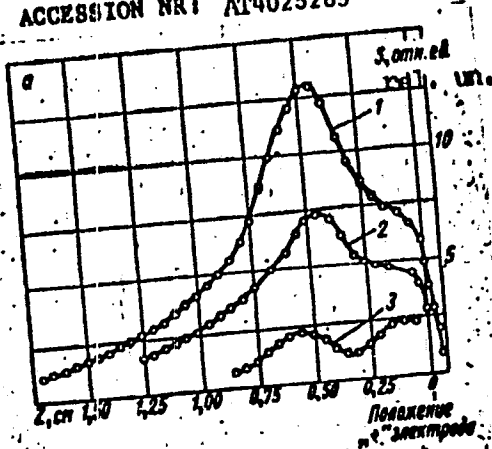


a - apparatus for time sweep of the x-ray image ( 1 - camera opening, 2 - film disc)  
b - photoelectric registration of x-rays ( 1 - aperture of camera, 2 - aluminum filter, 3 - scintillator, 4 - prism, 5 - photomultiplier, 6 - mask): c - three-objective camera obscura ( 1 - aperture, 2 - film disc): d - monochromator ( 1 - protective slot, 2 - mica, 3 - screen with diaphragm, 4 - rotating column: S - 0.5 mm dia. holes; A - image of pinched in non-decomposed x-radiation; B - image reflected at the Wulff-Bragg angle).



ACCESSION NR: AT4025289

ENCLOSURE: 03



Position of + electrode

Distribution of film density along the z axis (a) [filters: 1 - beryllium, 2 - aluminum, 3 - beryllium] and distribution of electron temperature along the pinch axis (b) [filters: 1 - beryllium, 2, 3 - beryllium and aluminum]

Card 5/5

L 31813-65 EWT(1)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWA(m)-2/EWA(h) Pp-4/Pt-6/Pab-10/  
Per, P1-4 LJP(c) AT

ACCESSION NR: AP5007392

S/0286/65/000/004/0044/0045

AUTHOR: Filippov, N. V.; Vinogradov, V. P.; Golub, G. V.

TITLE: Method of generating high-voltage pulses with the use of the plasma pinch effect. Class 21, No. 168362

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 44-45

TOPIC TAGS: pulse generation, high voltage pulse, plasma pinch, pinch effect

ABSTRACT: The Author Certificate introduces a method of generating high-voltage pulses by the plasma pinch effect. To excite high-voltage pulses at the solenoid terminals that are proportional to both the rate of change of the magnetic flux and the number of turns in the solenoid, the gas-discharge chamber is located in a longitudinal magnetic field, an insulating tube with the solenoid inside is positioned along the chamber axis, and a quick-varying magnetic field is excited by high-voltage pulses applied to the chamber electrodes. A ring-shaped plasma sheath is formed during discharge, and the magnetic-field intensity is changed by pinching the magnetic flux confined inside the sheath.

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L 34813-65

ACCESSION NR: AP5007392

ASSOCIATION: Predpriyatiye Goskomiteta po ispol'zovaniyu atomnoy ener-  
gii SSSR (Enterprise of the State Committee on Utilization of Atomic Energy, SSSR):

SUBMITTED: 08May63

ENCL: 00

SUB CODE: EC, ME

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3211

Card 1/1

FILIPPOV, N.Z.

Photographic sky-patrol around the North Pole. Biul. Abast. astrofiz.  
obser. 32:201-205 '65. (MIRA 18:10)

*FILIPPOV, N. V.*

AID P - 1770

Subject : USSR/Mining

Card 1/1 Pub. 78 - 8/26

Authors : Tempel', F. G., Filippov, N. V. and Zimenko, M. P.

Title : Gas separation in high-yielding and high-pressure gas wells

Periodical : Neft. khoz., v.33, no.3, 34-36, Mr 1955

Abstract : In order to prevent the impurities in the gas output of high-yielding and high-pressure gas wells from entering gas pipe-lines, special separators must be installed which will separate gas from water drops and sand. The author discusses some separators and points out the advantages of the cyclone-separator designed by the Central Scientific Research Laboratory. Tables

Institution: None

Submitted : No date

*Translation D 197016*

FILIPPOV, N.V.

Rebuilding DST-5000 creep testers. Zav. lab. 22 no.12:  
1498-1503 '56. (MLRA 10:2)

1. Institut mekhnaiki Akademii nauk SSSR.  
(Creep of metals) (Testing machines)

~~TEMPEL~~ FILIPPOV, N.V.

TEMPEL', F.G.; FILIPPOV, N.V.; KARPIY, V.N.; BOBAK, V.N.

Apparatus for odorizing gas under conditions of varying rate of  
flow. Gaz. prom. no.3:51-53 Mr '58. (MIRA 11:3)  
(Gas, Natural)

S/148/61/000/011/018/018  
E111/E480

AUTHOR: Filippov, N.V.

TITLE: The economics of using ferronickel in steelmelting practice

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.11, 1961, 199-205

TEXT: In the production of many grades of nickel steels, as well as in other applications, ferronickel can advantageously replace metallic nickel. Ferronickel can be produced by the blast-furnace, the sponge-iron or electric reduction-furnace process. The author discusses the technical and economic aspects of the various methods for various ores. The high chromium recovery in the blast furnace process is an important factor since it complicates subsequent steelmaking operations, and phosphorus is another contaminant. Pre-refining is needed. The rotary-kiln sponge process can be carried out in one or two stages. The chromium content of the product can be restricted to 1-1.5% but the two-stage process is needed if pre-refining for sulphur and non-metallic inclusions is desired. Ferronickel can be  
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The economics of using ferronickel ...

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E111/E480

improved by converter treatment: Soviet experiments have shown that a 20% Ni, low-carbon product can be obtained with low sulphur and phosphorus contents. Although there is considerable loss of iron, the enrichment means that no metallic nickel is required for steelmaking. At present, a considerable amount of ferronickel is used in the Soviet Union for structural and tool steels with 1 to 4% Ni; it is here that great cost savings are made and this application is easier than for high-alloy steels. In general, it is not only the impurities that limit the use of ferronickel and there is no advantage in reducing impurities below a certain level, depending on open-hearth furnace factors. Tests at the Zlatoustovskiy metallurgicheskii zavod (Zlatoust Metallurgical Works) have shown that with 10% of Orsk-Khalilovo sponge (0.14% S, 0.25% P and 17% slag inclusions) total charge time remained unchanged, but increased by 10 to 12% with 25% sponge. The author considers that the latter content should be assimilable without increasing charge time. At the Serovskiy metallurgicheskii kombinat (Serov Metallurgical Combine) in 1957, it was found that 50% of the hot metal could be replaced by chromium-nickel Orsk-Khalilovo semi-product without affecting charge time. The

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authors' estimates show that, compared with the cost of steel produced with metallic nickel, savings of up to 30% can be obtained for type 1X18M9 (1Kh18N9) steel by using ferronickel enriched to 20% Ni; for 12XM3 (12KhN3) and 12XM2 (12KhN2) steels the savings are 27.3 and 27% respectively, if single-kiln sponge remelted in an electric blast furnace is used; the saving for 40XM (40KhN) steel is 21.7% with the remelted sponge but produced from a different ore. There are 3 tables and 2 Soviet-bloc references.

ASSOCIATION: Leningradskiy politekhnicheskii institut  
(Leningrad Polytechnical Institute)

SUBMITTED: February 25, 1961

Card 3/3

FILIPPOV, N. V. (Moskva); ZHURIN, V. V. (Moskva); SULYAYEV, V. A. (Moskva)

Electric discharge in water. Inzh. zhur. 2 no. 4:341-343 \*62.  
(MIRA 16:1)

1. Institut mekhaniki AN SSSR.

(Electric discharges)

FILIPPOV, O.

From an unprofitable enterprise to a profitable one.  
Avt.transp. 43 no.11:15-16 N '65.

1. Direktor 69-go gruzovogo avtoparka Lentorgtransa. (MIRA 18:12)