"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Porkov, N. Ye.

PHASE I BOOK EXPLOITATION SOV/4314

Leningrad. Nauchno-issledovatel'skiy institut zemnogo magnetizma ionosfery i rasprostraneniya radiovoln

Trudy, vyp. 14 (24) (Transactions of the Scientific Research Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves, No. 14 (24)) Moscow, Svyaz'izdat, 1959. 144 p. Errata slip inserted. 1,000 copies printed.

Additional Sponsoring Agency: Ministerstvo svyazi SSSR

Ed.: (Title page): N. Ye. Malinina; Tech. Ed.: K.G. Markoch; Ed. (Inside book): G.I. Kiseleva.

PURPOSE: This publication is intended for geophysicists and other scientific and technical personnel in research institutes and geological exploration organizations. It may also be used by students of geophysics and geology.

COVERAGE: The articles in this collection deal with problems concerning the permanent magnetic field. The magnetic field of the earth and the geophysical phenomena associated with it, the geologic structure of the earth's crust, the

Card 1/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



magnetic properties of rocks, and the influence of the topographic relief upon magnetic measurements are discussed. The first of the three articles in the collection has been abstracted separately. References follow each article.

TABLE OF CONTENTS:

Pochtarev, V.I. Relationship of the Magnetic Field of the Earth With Other Geophysical Phenomena and With the Geologic Structure of the Earth's Crust 3

The author shows that the magnetic field of the earth is closely related to geologic features of the structure of the earth's crust and to the petrographic heterogeneities of the rocks composing it. It is shown that global anomalies are located on platform blocks which constitute the most stable sections of the earth's crust. The global centers of secular changes in the magnetic field correspond to geosynclinal regions, as unstable sections of the earth's crust. This distribution of global magnetic anomalies and of secular trend centers results from the fact that the rocks composing the crust, as well as part of the subcrustal layer involved in tectonic processes, possess magnetic properties and, undergoing a change with time, form the centers of the secular trend. This is also proved by the simultaneous existence of gravity and magnetic anomalies, a fact which can not be explained by the electric nature of magnetic anomalies. Electric currents



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



may generate the necessary magnetic field, but they can not account for the presence of the gravity anomaly field caused by large masses of considerable density. The geothermal gradient, usually accepted as equal to 33° per 1 km, can not be used in calculations of the temperature of the Earth's interior, since this gradient has been deduced on the basis of data referring only to sedimentary rocks. On the other hand, secular changes of the magnetic field may be regarded as a source of valuable information on the thermal and chemical processes occurring inside the Earth's crust. The author is of the opinion that his thesis on the origin of the global magnetic anomalies, as outlined in the article, makes it possible to explain those characteristic features of the magnetic field which hitherto have remained unexplained, namely: the geographic location of global magnetic anomalies and their relation to gravity anomalies; the complex phenomena of secular changes, global, regional, and local; the observed position of the magnetic poles; the greater magnetization of the Eastern Hemisphere, as compared with the Western; the behavior of zero isogonal lines, etc. The author thanks B.M. Yanovskiy, B.A. Andreyev, Yu. D. Kalinin, V.P. Orlov, D.L. Finger, and P.M. Gorshkov.



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, N.Ye.; POCHTAREV, V.I.

Effect of the topographic relief on magnetic measurements. (MIRA 12:8)
Trudy NIZMIR no.14:139-145 '59.
(Magnetism, Terrestrial)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

LILICH, L.S.; POPKOV, O.S.

Chemical potentials in $MeX_2$ - HX - $H_2O$ systems. Part 1: Chemical potentials of hydrochloric acid in $MeCl_2$ - HCl - $H_2O$ systems. (MIRA 15:5)
Vest.LGU 17 no.10:140-143 '62.
(Hydrochloric acid--Electric properties) (Systems (Chemistry))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, P.A.

LUGA,A.A., kandidat tekhnicheskikh nauk; PAVLOV,B.A., inzhener; POPKOV, P.A., inzhener; DOROFEYEV,F.I., inzhener; MOROZOV,N.I., inzhener; USACHEV,A.A., inzhener

Coffer construction by means of deeper sinking. Transp.stroi 5 no.5:23-24 Jl'55. (MLRA 8:12)

(Cofferdams)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

L 01086-67 EWP(e)/EWT(m)/EWP(v)/EWP(j)/T/EWP(t)/ETI IJP(c) JD/WW/RM/WH

ACC NR: AP6021248 SOURCE CODE: UR/0121/66/000/003/0007/0011

AUTHOR: Popov, S. A.; Storchak, G. A.; Malevskiy, N. P.

ORG: None

TITLE: Range of application for diamond wheels made with an organic binder

SOURCE: Stanki i instrument, no. 3, 1966, 7-11

TOPIC TAGS: diamond, grinding, abrasive material, synthetic material, CUTTING TOOL

ABSTRACT: Data are given on the use of diamond wheels made with bakelite binders with respect to selection of the most efficient conditions for grinding various types of hard-alloy cutting tools. The experimental work was done on S194 and 3A64AM grinders using AChK125×10×3 wheels using M1 and B1 binders with grain sizes of A8 and A5 respectively. Analysis of experimental data on the effect which grain size has on cutting conditions and wheel wear shows that diamond wheels with moderate granularity (AS6-AS12) have the highest cutting capacity. Coarser wheels (AS16-AS25) have poorer cutting properties while fine-grained wheels show the worst cutting performance. It was found that an increase in diamond concentration reduces cutting force requirements. Diamond wheels with a bakelite binder show minimum wear with a 100-150% diamond concentration for grain sizes of AS12-AS8. Test data show that Soviet diamond wheels based on organic binders are as durable and productive as the best models made by some firms in the United States, Belgium, Holland and Japan. Orig. art. has: 7 figures, 2 tables.

SUB CODE: 13, 11/ SUBM DATE: none

Card 1/1 vl

UDC: 621.9.025.7.004.14

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, S. L.

On 28 December 1945, at the Power Engineering Institute imeni Molotov, defended his dissertation on "Single-Phase Induction Transmitters of Synchronous Rotary Motion Using Constant-Frequency Alternating Current". Official opponents - Doctor of Technical Sciences Professor N. V. Gorokhov, and Doctor of Technical Sciences Professor Ye. V. Nitusov.

So: Elektrichestvo, No 4, April 1947, pp 90-94 (U-5577, 18 February 1954)

This work presented the principal circuits which determined the electromagnetic processes in the elements of single-phase transmission of synchronous rotary motion with asymmetry in the primary and secondary circuits. As a result the characteristics were determined of single-phase transmission of synchronous rotary motion, relationships were obtained in simple form for the currents and the moment of normal single-phase transmission of synchronous rotary motion, taking into account the full resistance of the primary circuit, and a simple method was given for calculating the characteristics of single-phase transmission of rotary motion with small displacement angles using normal asynchronous motors. The precision of the method of calculation presented was verified experimentally.

So: IBID

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, S.L.; MASHAROVA, V.G., redaktor; ZUDAKIN, I.M., tekhnicheskiy redaktor.

[Principles of an electric drive servomechanism]Osnovy sledíashchego elektroprivoda. Moskva, Gos. izd-vo oboronnoi promyshlennosti,1955. 271 p. (MLRA 8:4)
(Servomechanisms)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Popkov, S.L.

BABAKOV, N.A., professor; TSYPKIN, Ya.Z., professor; SHUMILOVSKIY, N.N., professor; RATIN, S.L., kandidat tekhnicheskikh nauk; POPKOV, S.L., kandidat tekhnicheskikh nauk; NAUMOV, B.N., inzhener.

"Elements of the theory of automatic control." A.A.Voronov. Reviewed by N.A.Babakov and others. Elektrichestvo no.5:87-88 My '55. (Automatic control) (Voronov, A.A.) (MLRA 8:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

PHASE I BOOK EXPLOITATION 972

Popkov, Solomon L'vovich

Osnovy sledyashchego elektroprivoda (Principles of Servomechanisms) 2d ed., rev. and enl. Moscow, Oborongiz, 1958. 362 p. 15,000 copies printed.

Reviewers: Gerasimov, K.M., Engineer, and Kozheurov, Ye.I., Candidate of Technical Sciences; Ed.: Alekseyev, K.B., Candidate of Technical Sciences; Ed. of Publishing House: Petrova, I.A.; Tech. Ed.: Rozhin, V.P.; Managing Ed.: Sokolov, A.I., Engineer

PURPOSE: The book is approved by the Administration of Special Secondary Schools of the Ministry of Higher Education of the USSR for use as a textbook in tekhnikums. It may also be useful to the general reader wishing to acquaint himself with the fundamentals of servomechanisms.

Card 1/13

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Principles of Servomechanisms 972

COVERAGE: The book outlines the fundamental principles of servomechanisms and describes the components and units of servomechanism systems. The author thanks I.I.Pogozhev, A.A.Osmer, B.N.Naumov, B.S.Sotskov, N.V.Gorokhov (deceased), and E.G.Uderman for their valuable help in reviewing the manuscript. He also thanks Yu.S.Popkov, who wrote Chapter 4. There are 51 references, of which 48 are Soviet (including 1 translation), and 3 English.

TABLE OF CONTENTS:

Foreword to the second edition 3

Foreword to the first edition 3

Introduction 5

PART 1. COMPONENTS AND UNITS OF SERVOMECHANISMS 9

Ch. 1. Remote Transmission of Angular Position by Means of Selsyns
1. General information 9
2. Construction and operating principle of selsyns 9



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, S.L., dotsent, kand.tekhn.nauk

Example of a servomechanism design. Trudy VZEI no.9:170-187 '58. (MIRA 12:10)
(Servomechanisms)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, Sasha

In a forest. IUn. nat. no.11:14 N '61. (MIRA 14:11)

1. Chlen kruzhka "Yunnyc zoologi" srednoy shkoly No.7, Kaliningrad, Moskovskaya oblast.
(Birds--Behavior)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AM4016101 BOOK EXPLOITATION S/

Popkov, S. L.; Popkov, Yu. S.

Continuous and discrete servomechanisms (Neprery*vny*ye i diskretny*ye sledyashchiye sistemy*). Moscow, Izd-vo "Energiya", 1964. 303 p. illus., biblio. 15,000 copies printed.

TOPIC TAGS: servomechanism, servosystem, continuous servosystem, discrete servosystem, linear servosystem, nonlinear servosystem, pulse servosystem, digital servomechanism

PURPOSE AND COVERAGE: This book is intended for technical and scientific personnel concerned with automation. It deals with some problems of the theories and the calculation of continuous servosystems during regular and random effects and of relay and pulse servosystems. Various types of coding and decoding converters are studied on the basis of digital servosystems and a qualitative evaluation of the latter is given.

TABLE OF CONTENTS:

Foreword -- 3

Card 1/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AM4016101

Introduction -- 7

1. Types of servosystems -- 7
2. Methods of calculating servosystems -- 18

PART ONE. CONTINUOUS SERVOSYSTEMS

Ch. I. Calculation of servosystems on the basis of selected qualitative indexes -- 25

1. Determination of servosystem parameters on the basis of the minimum of the integral square deviation -- 25
2. The principle of maximum and its application for the solution of simple problems concerning the maximum speed of response -- 35
3. Synthesis of a servosystem having a maximum speed of response based on the maximum principle -- 44

Ch. II. Linear servosystems during random signals -- 52

1. Some information from the theory of random processes -- 52

Card 2/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AM4016101

2. Passage of a random signal through a linear system. The quality of a system -- 60
3. Determining servosystem parameters on the basis of the minimum of mean square deviation -- 67
4. Determining servosystem structure under the condition of the minimum of mean square deviation -- 78
5. Selection of servosystem correcting device on the basis of the minimum of mean square deviation -- 90

Ch. III. Nonlinear servosystems during random signals -- 107

1. Evaluation of servosystem quality by the method of statistical linearization -- 107
2. Application of Markov processes in evaluating servosystem steady-state errors -- 125
3. Selection of the correcting device in a nonlinear servosystem -- 142



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AM4016101

PART TWO. DISCRETE SERVOSYSTEMS

Ch. IV. Relay servosystems -- 148

1. Stability and quality of a relay servosystem -- 148
2. Analysis of a relay servosystem operating under natural oscillation conditions -- 155
3. Determining natural oscillation parameters in a relay servosystem by the method of harmonic balance -- 166
4. Analysis of a relay servosystem with a harmonic input signal -- 175
5. Optimum transients in a relay servosystem -- 183

Ch. V. Pulse servosystems -- 188

1. Lattice functions and discrete Laplace transforms -- 188
2. Transfer functions of a pulse servosystem -- 205
3. Frequency characteristics of a pulse servosystem -- 213
4. Stability criteria of a pulse servosystem -- 220

Card 4/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AM4016101

5. Quality of processes in a pulse servosystem -- 231
6. The pulse servosystem with a key -- 240
7. Nonlinear pulse servosystem -- 251

Ch. VI. Digital servosystems -- 265

1. General information -- 265
2. Digital servosystem for program control of an object -- 280
3. Quality of a digital servosystem -- 286

Appendix 1. Table of integrals -- 292

Appendix 2. Dependences $c_1(\langle\theta\rangle, \delta_1)$ and $c_2(\langle\theta\rangle, \delta_1)$ for typical nonlinearities -- 294

Appendix 3. Some information on Markov process theory -- 298

Bibliography -- 302

Card 5/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, S.L.; POPKOV, Yu.S.; KOROLEV, N.A., red.; BUL'DYAYEV, N.A., tekhn. red.

[Continuous and discrete tracking systems] Nepreryvnye i diskretnye slediashchie sistemy. Moskva, Izd-vo "Energiia," 1964. 303 p. (MIRA 17:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, S.L.; BABAKOV, N.A., doktor tekhn. nauk, prof., red.

[Manual for the couse on computer equipment and apparatus; electronic analog computers] Uchebnoe posobie po kursu: Schetnoe reshaiushchie pribory i ustroistva; elektronnye modeliruiushchie ustroistva. Moskva, 1962. 75 p. (MIRA 16:4)

1. Moscow. Vsesoyuznyy zaochnyy energeticheskiy institut. Kafedra avtomaticheskogo kontrolya i regulirovaniya.
(Electronic analog computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

S/124/60/000/003/005/017
A005/A001

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 3, p. 13, # 2938

AUTHOR: Popkov, S. L.

TITLE: An Example of Calculating a Servo System

PERIODICAL: Tr. Vses. zaochn. energ. in-ta, 1958, No. 9, pp. 170-187

TEXT: An example is given of calculating a servo system consisting of the following components: a synchrotransformer, an electronic amplifier, an EMU (EMU) with transverse field, a control motor, and a reducing gear. The nonlinearities of the electronic amplifier, the motor and the reducer are taken into account. Equivalent amplitude-phase characteristics are plotted for the nonlinear components according to the L. S. Gol'dfarb method. The choice of the feed back parameters is performed, and the phase trajectories of the optimum transient processes are plotted, which are used for determining the characteristics of the functional converters switched into the system for the realization of the optimum conditions.

Ye. N. Miroslavlev

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, Solomon Lvovich; BERNSHTEYN, S.I., red.; MESHKOV, A.A., red.izd-va; YEZHOVA, L.L., tekhn. red.

[Servo systems] Sledíashchie sistemy. Moskva, Vysshaia shkola, 1963. 303 p. (MIRA 17:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.

G. M. Krzhizhanovskii, revolutionary fighter and student of the power industry; a biographic sketch. p. 430.

PRZEGLAD ELEKTROTECHNICZNY. (Stowarzyszenie Elektrykow Polskich) Warszawa, Poland, Vol. 35, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

30(11)
AUTHOR: Popkov, V., Corresponding Member, Academy of Sciences, USSR

SOV/29-59-2-7/41

TITLE: The Future Will Be Marked by the Highest Energy Equipment (Gryadushcheye budet znamenovat'sya vysochayshey energovooruzhennost'yu)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 2, p 9 (USSR)

ABSTRACT: To a question asked by the editors of the periodical "Tekhnika - molodezhi" how he imagined future, V. Popkov answered: Communism will be marked by the highest productivity and consequently by the energy equipment of human working capacity. The energy equipment will have to exceed the modern "high" standards 10, 100, 1000 times. For this purpose, not only the inexhaustible sources of energy - guided thermonuclear reactions - must be utilized, but the whole transformation of energy must be controlled. It should be achieved that any energy is immediately transformed to electric energy. And vice versa, one should be able to convert electric energy directly to other energies. I do not believe that the technology of the future, the Communist technology, will go the way of individual atomic "pocket batteries". The advantages of a centralized

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

NIKOL'SKAYA, M.N.; GANDEL', V.G.; POPKOV, V.A.

Detection of sulfanilamide preparations by the method of thin-layer crystallization. Apt. delo 14 no. 4:63-65 Jl-Ag '65 (MIRA 19:1)

1. I Moskovskiy ordena Lenina meditsinskiy institut imeni I.M. Sechenova.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POLIVOY, V.D.

Rivers, Right of Navigation of

Danube Convention of 1948 and questions of regulating international rivers by law, Uch.Zap.Mosk.un. no. 153, 1951.

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Popkov, V.F.

POPKOV, V.F.

Observations on the volcanic activity of Klyuchevskaya Sopka and Ploskiy Tolbachik Sopka from July 1, 1939 to January 1, 1940. Biul.Vulk.sta. no.11:3-10 '47. (MLRA 8:11)
(Klyuchevskaya Sopka) (Ploskiy Tolbachik Sopka)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV,V.F. (s.Klyuchi na Kamchatke)

Macroseismic observations in the region of Klyuchevskaya Sopka and Ploskiy Tolbachik Sopka from June 3, 1939 to June 22, 1940. Biul. Vulk. sta. no.11:22-25 '47. (MLRA 8:11)
(Kamchatka--Earthquakes) (Klyuchevskaya Sopka) (Ploskiy Tolbachic Sopka)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.F.

Lava in Zheltyy Glacier on Sopka Zimina. Trudy Kamch.vulk.sta. no.2:66-93 '48. (MLRA 6:5)

1. Kamchatskaya vulkanologicheskaya stantsiya. (Zheltyy Glacier--Lava)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV. V. G.

Popkov, V. G. "The bending of disks of a fixed thickness with the simultanious action of transverse and radial forces", Sbornik trudov In-ta stroit, mekhaniki (Akad. nauk Ukr., SSR), Vol. X, 1948, (In index: 1949), p. 193-207.

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

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. G.

POPKOV, V. G. "Stresses in rotating disks, taking into account the effect of temperature", Inform. materialy (Akad. nauk Ukr. SSR, In-t stroit. mekhaniki), No. 3, 1949, p. 51-60.

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

1. POPKOV, V.G.

2. USSR (600)

4. Disks, Rotating

7. Plastic stress condition of rotating discs, Sbor.trud.Inst.stroi.mekh. AN URSR no. 16, 1952.

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

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

PISARENKO, G.S.; VAYNBERG, D.V.; POPKOV, V.G., kandidat tekhnicheskikh nauk, redaktor.

[Mechanical vibrations] Mekhanicheskie kolebaniia. Kiev, Gos. izd-vo tekhn. lit-ry USSR., 1953. 139 p. (MLRA 7:8)
(Vibration)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

124-57-1-1230

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 168 (USSR)

AUTHORS: Vaynberg, D.V., Popkov, V.G., Umanskiy, E.S.

TITLE: Calculation of the Forces and Deformations in the Body of Tooth Gears With Arms (Raschet usiliy i deformatsiy v korpuse zubchatykh koles so spitsami)

PERIODICAL: Sb. tr. In-ta stroit. mekhan. AN UkrSSR, 1955, Nr 20, pp 5-38

ABSTRACT: The stressed state of the body of a tooth gear equipped with arms is determined. The gear is examined as a cyclically symmetrical multicontour frame. The following assumptions are made: 1) The rim of the wheel has a constant cross section and is considered as a beam with small curvature; 2) The axis of the rim, the axes of all arms, and the external loads all lie in a single plane; 3) All arms are alike and are rigidly fixed in the rim and in an absolutely rigid hub. A numerical example is given of the calculation of the body of a gear for the reduction gear of a shaft elevator; the derivation of calculation formulas is given.

Card 1/1 1. Gears--Design 2. Gears--Stresses --Mathematical analysis

Yu.P.Grigor'yev

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

124-57-1-1229

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 168(USSR)

AUTHORS: Vaynberg, D.V., Popkov, V.G., Umanskiy, E.S.

TITLE: Initial Stresses in Composite Wheels (Nachal'nyye napryazheniya v sostavnykh kolesakh)

PERIODICAL: Sb. tr. In-ta stroit. mekhan. AN UkrSSR, 1955, Nr 20, pp 73-95

ABSTRACT: An approximate method for the determination of the stresses arising from the assembly of composite wheels equipped with spokes. For wheels having a sectional hub the forces exerted by the fit of the tire onto the center of the wheel and the forces resulting from the fit of the fastening rings onto the hub are determined. The formulas obtained are employed also for the calculation of the initial stresses in wheels with a solid hub. A numerical example is adduced showing the stresses in the body of a composite wheel with a cast-iron center, a steel tire, and six spokes.

1. Wheels--Stresses--Mathematical analysis

Yu.P.Grigor'yev

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V., dvazhdy Geroy Sovetskogo Soyuza, gvardii general-mayor aviatsii; IL'IN, N., gvardii podpolkovnik

Meeting in the air. Grazhd. av. 21 no.7:10 Jl '64. (MIRA 18:4)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

PISARENKO, Georgiy Stepanovich, akademik; AGAREV, Viktor Andreyevich; KVITKA, Aleksandr L'vovich; POPKOV, Viktor Grigor'yevich; UMANSKIY, Emmanuil Solomonovich; GRYAZNOV, B.A., red.

[Course on the strength of materials] Kurs soprotivleniia materialov. [By] G.S.Pisarenko i dr. Kiev, AN URSR, 1964. 467 p. (MIRA 17:10)

1. Akademiya nauk Ukr.SSR (for Pisarenko).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.G., ISAKHANOV, G.V.

Investigating initial stress relation and the strength of composite silicon carbide - graphite specimens. Vop. por. met. i prochn. mat. no.8:116-121 '60. (MIRA 13:8)
(Laminated metals--Testing)
(Ceramic metals--Testing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

PISARENKO, Georgiy Stepanovich, prof., doktor tekhn. nauk; AGAREV, Viktor Andreyevich, kand. tekhn. nauk; KVITKA, Aleksandr L'vovich, kand. tekhn. nauk; POPKOV, Viktor Grigor'yevich, kand. tekhn. nauk; UMANSKIY, Emmanuil Solomonovich, kand. tekhn. nauk; ZELENYUK, Ye.Ye., inzh., red.izd-va; [redacted], G.A., tekhn. red.

[Strength of materials] Soprotivlenie materialov. [By] G.S. Pisarenko i dr. Kiev, Gostekhizdat USSR, 1963. 790 p. (MIRA 17:2)

1. Chlen-korrespondent AN Ukr.SSR (for Pisarenko).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, Vasiliy Ivanovich, kand.tekhn.nauk; SERGIYEV, Vladimir Poliyenovich; VORONIN, G.M., retsenzent; NIKITIN, V.M., retsenzent; GABOVA, D.M., red.; KNAKNIN, M.T., tekhn.red.

[Work organization at garment factories] Organizatsiia proizvodstva na shveinom predpriiatii. Izd.2., perer. i dop. Moskva, Izd-vo nauchno-tekhn.lit-ry, 1960. 202 p. (MIRA 14:6)

(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I. (Moskva)

Modeling and design of clothing for mass production. Shvein. prom. no. 6:15-22 N-D '60. (MIRA 14:1)
(Costume design)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

"Investigation of the Methods for Coordinating in Time the Operations of the Continuous Manufacturing Process in the Sewing Industry." Sul 25 Jun 47, Moscow Textile Inst

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

SO: Sum.No. 457, 18 Apr 55

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

28843

Vnyedryath obbyektivnyye myetody kontrolya (Na shvyeynykh fabrikakh) Lyegkaya prom-stv, 1949 No 8, S. 10-11

SO: LETOPIS No. 34

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.

Dressmaking

Cutting women's apparel. A. V. BLANK, F. A. GORELENKOVA Leg. prom. 12 no. 4:47-48 Ap '52

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I.

Efficiency, Industrial

Lack of coordination in planning at sewing factories. Leg. prom. 12 No. 5 (1952)

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

1. POPKOV, V. I.; PUSHKIN, P. S.; SAVOSTITSKIY, A. V.

2. USSR (600)

4. Conveying Machinery

7. Using the conveyor system for continuous production in light industry. P. D. Aleksandrov; reviewed by V. I. Popkov, P. S. Pushkin, A. V. Savostitskiy. Leg. prom. 12, no. 10, 1952

9. **Monthly List of Russian Accessions, Library of Congress,** January **1953. Unclassified.**

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I.; SERGIYEV, V.P.

[Production organization in sewing establishments] Organizatsiia proizvodstva na shveinom predpriiatii. Moskva, Gos.izd-vo Ministerstva legkoi i pishchevoi promyshl., 1953. 174 p. (MLRA 6:12)
(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Popkov, V.I.

POPKOV, V.I., kand.tekhn.nauk.

Progress in the clothing industry. Leg.prom. 17 no.11:37-43 N '53.
(MIRA 10:12)
(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., kand. tekhn. nauk.

Improved quality and greater variety in the clothing industry.
Leg. prom. 16 no.8:4-7 Ag '56. (MIRA 10:12)
(Clothing industry--Quality control)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., kand.tekhn.nauk

Fashion congress in Moscow. Leg.prom. 17 no.9:8-11 S '57.
(MIRA 10:12)
(Moscow--Fashion shows) (Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V., kand. tekhn. tekhn.nauk; CHVANOV, V., starshiy nauchnyy sotrudnik, laureat Stalinskoy premii; DAVIDOVICH, V.

In the interest of millions of workers. Sov. profsoiuzy 7 no.12: 22-25 Je '59. (MIRA 12:9)

1.Direktor TSentral'nogo nauchno-issledovatel'skogo instituta shveynoy promyshlennosti (for Popkov). 2.TSentral'nyy nauchno-issledovatel'skiy institut shveynoy promyshlennosti (for Chvanov). 3.Korrespondent zhurnala "Sovetskiye profsoyuza (for Davidovich).
(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., red.; RUSAKOV, S.I., retsenzent; RYCHKOVA, O.I., red.; PLEMYANNIKOV, M.N., red.; BATYREVA, G.G., tekhn. red.

[Handbook for the clothier] Spravochnik shveinika. Moskva, Izd-vo "Legkaia industriia." Vol.3. 1964. 397 p. (MIRA 17:4)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., kand. tekhn. nauk

Clothing industry requirements toward textile makers. Tekst. prom. 24 no.9:9-12 S '64. (MIRA 17:11)

1. Direktor TSentral'nogo nauchno-issledovatel'skogo instituta shveynoy promyshlennosti.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I. (Moskva)

Demands of the clothing industry on textile fabric makers.
Shvein. prom. no.4:1-3 Jl-Ag '64. (MIRA 17:10)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

MARAKUSHEV, Ye.A.; KUSNER, B.A.; SAFRONOVA, I.V.; TARASOVA, V.P.; POPKOV, V.I., otv. red.; RUSAKOV, S.I., retsenzent; PLEMYANNIKOV, M.N., red.; VINOGRADOVA, G.A., tekhn. red.

[Handbook for workers of the sewing industry] Spravochnik shveinika. Moskva, Gos.izd-vo "Rostekhizdat," Vol.2. 1962. 299 p. (MIRA 15:3)

(Sewing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., kand. tekhn.nauk, otv. red.; BERLYAND, I.Ya., red.

[Technological instructions for the manufacture of headgear from woven materials] Tekhnologicheskie instruktsii po izgotovleniiu golovnykh uborov iz tkanykh materialov. Moskva, Gosbytizdat, 1963. 169 p. (MIRA 17:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut shveynoy promyshlennosti.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I. (Moskva)

Improve the assembly-line methods of work. Shvein. prom. no.6:4-9 N-D '63. (MIRA 17:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

BOSHKATOV, Ya.I., red.; BOYAR,O.G., red.; VLASOV, L.F., red.;LIFSHITS, M.O., red.; MASHKILLEYSON, L.N., red.; MILOVIDOV, B.M.[deceased], red.; MOLCHANOVA, O.P., red.; POL'SHANSKIY, V.S., red.; POPKOV, V.I., red.; REVIN, A.I., otv. red.; TIMOFEYEVA, Z.N., red.; LAZAREV, S.M., tekhn. red.; LEBEDEVA, L.A., tekhn. red.

[Concise encyclopedia of home economics] Kratkaia entsiklopediia domashnego khoziaistva. Izd.2. Moskva, Gos. nauchn. izd-vo "Sovetskaia entsiklopediia." Vol.1. A-M. 1962. 895 p. Vol.2. N-IA. 1962. 903-1758 p. (MIRA 15:6)
(Home economics--Dictionaries)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., kand. tekhn. nauk; TER-OVAKIMYAN, I.A.; KOBYLYANSKIY, D.A.; KOLESNIKOV, P.A.; PERTSEV, G.V.; MARAKUSHEV, Ye.A.; RUSAKOV, S.I., retsenzent; PLEMYANNIKOV, M.N., red.; SHAPENKOVA, T.A., tekhn. red.

[Handbook for the clothing industry worker] Spravochnik shveinika. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR. Vol.1. 1960. 335 p. (MIRA 15:1)

(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

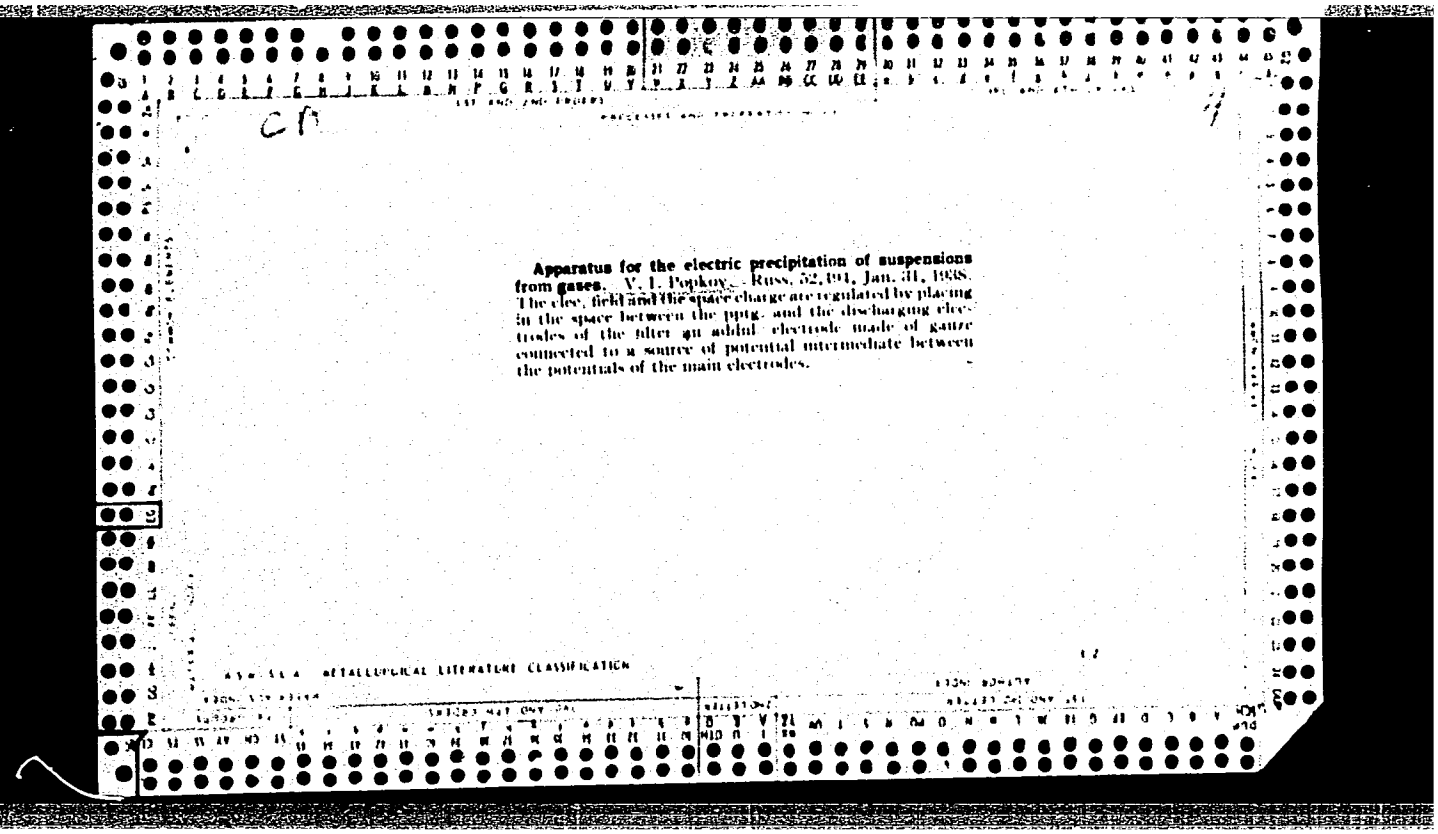
"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

RUSAKAV, Sergey Ivanovich; TRUKHAN, Gennadiy Lukich; EPPEL', Sergey Sergeyevich; POPKOV, Vasiliy Ivanovich; VORONIN, G.M., inzh., retsenzent; KARASEV, V.K., dots., retsenzent; ANTIPOVA, A.I., prepod., retsenzent; SHANG'GINA, V.F., kand. tekhn. nauk, retsenzent; MINAYEVA, T.M., red.; SHAPENKOV, T.A., tekhn. red.

[Technology of clothing manufacture] Tekhnologiia shveinogo proizvodstva. Izd.2., perer. i dop. Moskva, Gos. izd-vo "Rostekhizdat, 1961. 670 p. (MIRA 15:2)
(Clothing industry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

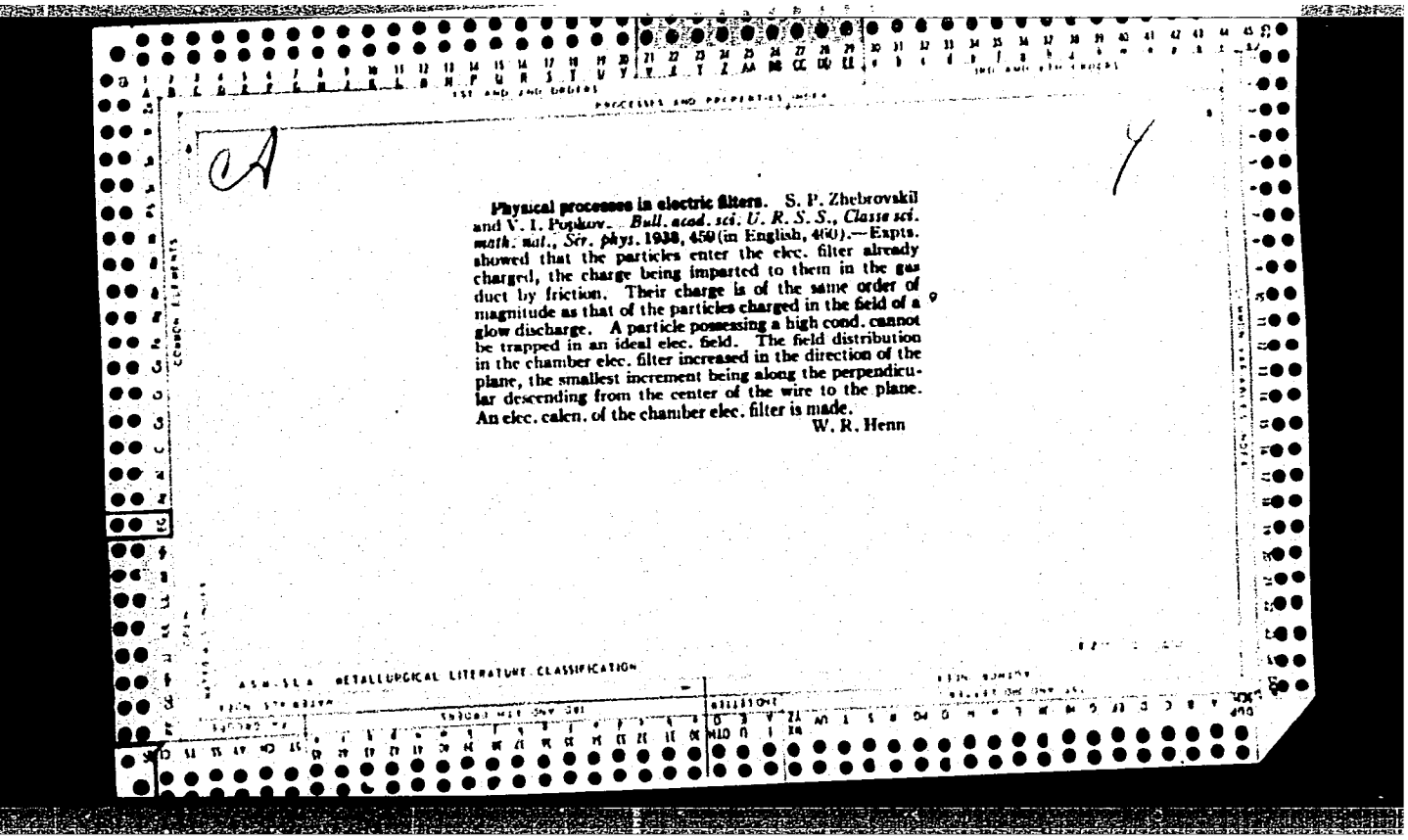
"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



**Apparatus for the electric precipitation of suspensions from gases.** V. I. Popkov. Russ. 52,191, Jan. 31, 1938. The elec. field and the space charge are regulated by placing in the space between the pptg. and the discharging electrodes of the filter an addnl. electrode made of gauze connected to a source of potential intermediate between the potentials of the main electrodes.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



CA

**Physical processes in electric filters.** S. P. Zhebrovskiĭ and V. I. Popkov. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Sér. phys.* 1938, 459 (in English, 460).—Expts. showed that the particles enter the elec. filter already charged, the charge being imparted to them in the gas duct by friction. Their charge is of the same order of magnitude as that of the particles charged in the field of a glow discharge. A particle possessing a high cond. cannot be trapped in an ideal elec. field. The field distribution in the chamber elec. filter increased in the direction of the plane, the smallest increment being along the perpendicular descending from the center of the wire to the plane. An elec. calcn. of the chamber elec. filter is made.

W. R. Henn

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

"A study of the corona", by Candidate of Technical Sciences V. I. Popkov, at the Power Engr. Inst. im KRZHIZHANOVSKIY of the Acad. Sce. USSR.

SO: Elektrichestvo, No 5, Moscow, May 1947 (U-5533)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

PA 38T14

USSR/Electricity Nov 1947
Corona Discharges
Fields, Electromagnetic

"Theory of Bipolar Coronas on Conductors," V. I. Popkov, Energetics Institute imeni G. M. Krzhizhanovskiy, Academy of Sciences of the USSR, 4 pp

"Dok Ak Nauk" Vol LVIII, No 5

In DC circuits the coronization of two parallel conductors of different polarity is connected with a much greater current power than the current in a unipolar discharge. Author conducted experiments to study the electric fields and the distribution of the volume of ion discharges and arrived at the conclusion that the

[redacted] 38T14

USSR/Electricity (Contd) Nov 1947

two moments of relationship have a simultaneous effect in the outside zone as well as in the covering case. Measurements were conducted by a method of characteristic sondes with a control check of the potential of the pole by means of an incandescent sonde. Submitted by Academician G. M. Krzhizhanovskiy, 26 Apr 1947.

[redacted] 38T14

POPKOV, V. I.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

2

USSR/Physics Nov 1947
Corona Discharges
Corona, Solar

"Movement of Ions in Corona Discharges," V. I. Popkov, Energetics Institute imeni G. M. Krzhizhanovskiy, Academy of Sciences of the USSR, 4 pp

"Dok Ak Nauk" Vol LVIII, No 6

Gives the results of investigations on the electrical field outside of the zone of corona combustion, which offered the possibility for determining the movement to a more accurate degree and by a more accurate method. Experimental investigation of the fields for the system of corona combustion was conducted by a method

56760

USSR/Physics (Cont'd) Nov 1947

of the zonde characteristics, and was possible due to determined conditions for the measurement of the potential space F, as well as the product kE of the movement k at the level of the ion E. Submitted by Academician G. M. Krzhizhanovskiy 25 Apr 1947.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

Popkov, V. I. defended his Doctor's dissertation in the Power Engineering Institute im Krzhizhanovskiy, USSR, on 25 March 1948, for the academic degree of Doctor of Technical Sciences.

Dissertation: "Investigation of the Electric Field of Conductors Exhibiting Corona and the Theory of Power Losses to Bipolar Corona in High Voltage DC Power Transmission".

Official Opponents: Profs. A. A. Vorob'yev, and N. A. Kaptsov (Doctors of Physicomathematical Sciences); A. M. Zalesskiu and S. P. Zhebrovskiu (Doctors of Technical Sciences).

SO: Elektrichestvo, No. 7, Moscow, August 1953, pp 87-92 (W/29844, 16 Apr 54)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I. PA 70T27

USSR/Electricity Apr 1948
Conductors

"Theory of Bipolar Corona on Conductors," V. I. Popkov, Power Engr Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR, 15 pp

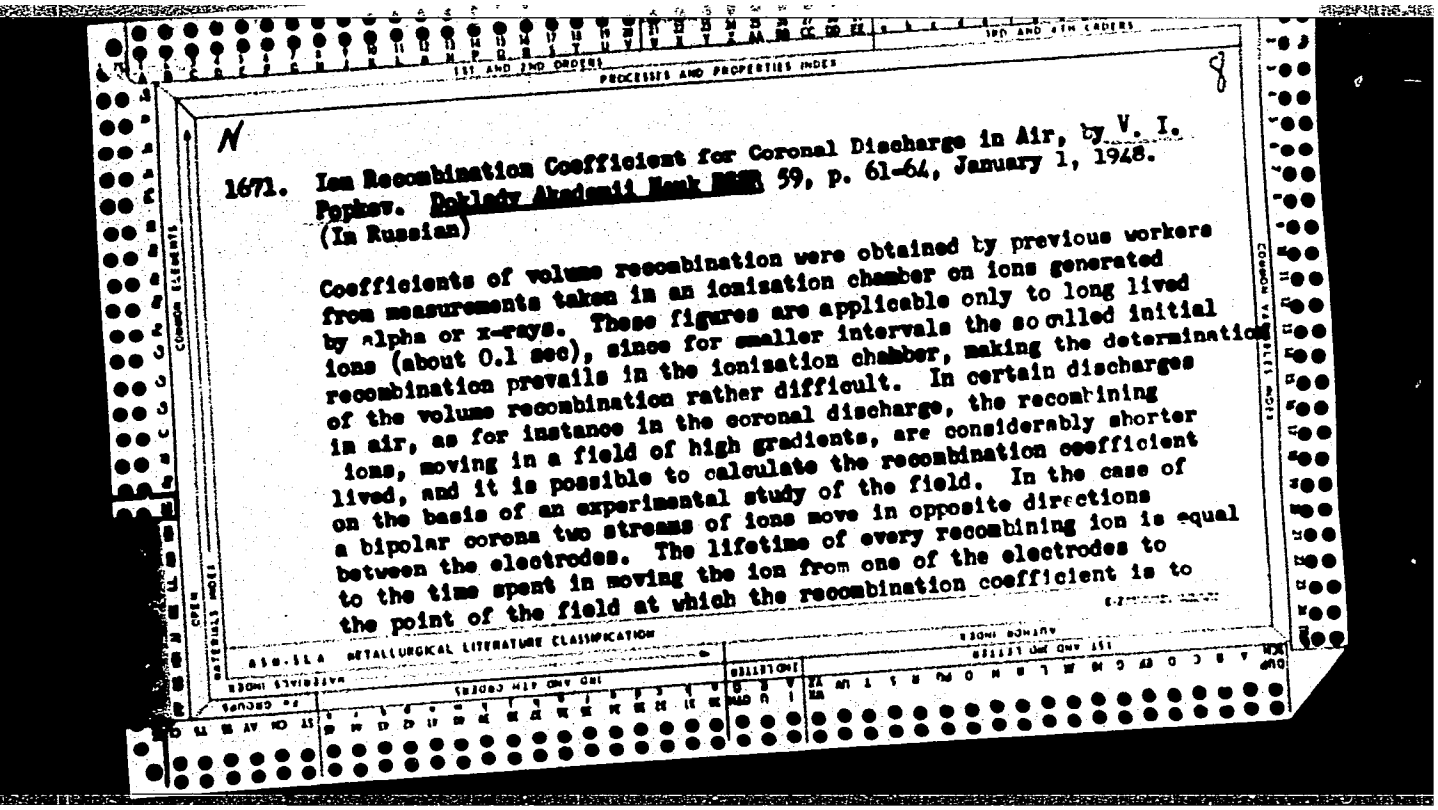
"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 4

Studied behavior of bipolar corona on conductors. Derived equations, describing the electric field of corona conductors, and fundamental behavior of bipolar corona. Shows conformity of theory with data obtained from the experiments. Submitted Feb 1948.

[redacted] 70T27

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



N

1671. Ion Recombination Coefficient for Coronal Discharge in Air, by V. I. Popkov. Doklady Akademii Nauk SSSR 59, p. 61-64, January 1, 1948. (In Russian)

Coefficients of volume recombination were obtained by previous workers from measurements taken in an ionisation chamber on ions generated by alpha or x-rays. These figures are applicable only to long lived ions (about 0.1 sec), since for smaller intervals the so called initial recombination prevails in the ionisation chamber, making the determination of the volume recombination rather difficult. In certain discharges in air, as for instance in the coronal discharge, the recombining ions, moving in a field of high gradients, are considerably shorter lived, and it is possible to calculate the recombination coefficient on the basis of an experimental study of the field. In the case of a bipolar corona two streams of ions move in opposite directions between the electrodes. The lifetime of every recombining ion is equal to the time spent in moving the ion from one of the electrodes to the point of the field at which the recombination coefficient is to

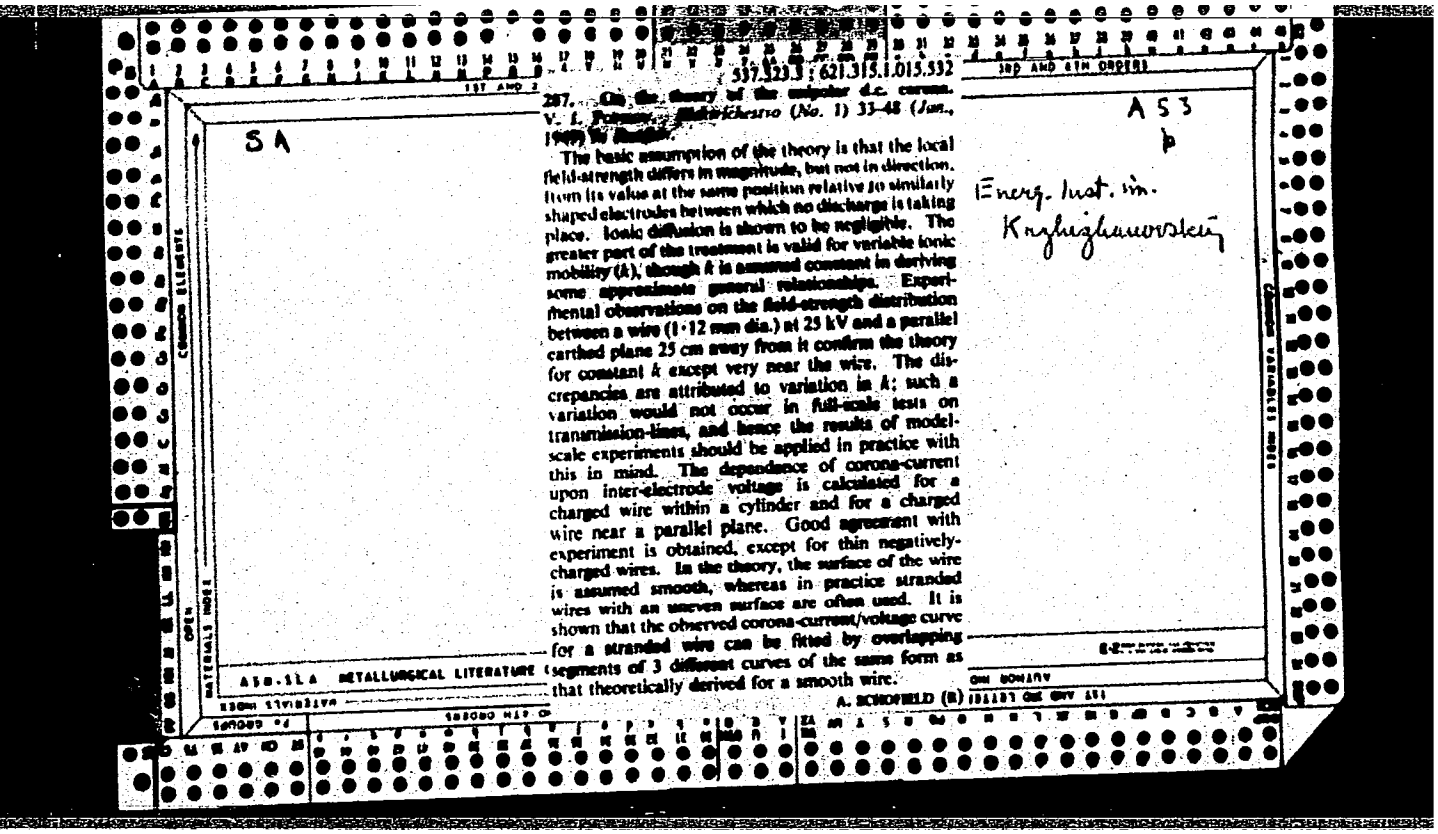
APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

be determined. The growing difference in lifetime of the two recombining ions causes the coefficient to increase toward the two electrodes, from a minimum corresponding to a middle point. The obtained values of the recombination coefficient (maximum $2.16 \times 10^{-6}$) minimum $1.26 \times 10^{-6}$) show only small deviation from those given by authors using the ionization chamber method.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



537.323.3 : 621.315.1.015.532

287. On the theory of the unipolar d.c. corona. V. I. Popov. Elektrichestvo (No. 1) 33-48 (Jan., 1949) in Russian.

The basic assumption of the theory is that the local field-strength differs in magnitude, but not in direction, from its value at the same position relative to similarly shaped electrodes between which no discharge is taking place. Ionic diffusion is shown to be negligible. The greater part of the treatment is valid for variable ionic mobility ($k$), though $k$ is assumed constant in deriving some approximate general relationships. Experimental observations on the field-strength distribution between a wire (1·12 mm dia.) at 25 kV and a parallel earthed plane 25 cm away from it confirm the theory for constant $k$ except very near the wire. The discrepancies are attributed to variation in $k$; such a variation would not occur in full-scale tests on transmission-lines, and hence the results of model-scale experiments should be applied in practice with this in mind. The dependence of corona-current upon inter-electrode voltage is calculated for a charged wire within a cylinder and for a charged wire near a parallel plane. Good agreement with experiment is obtained, except for thin negatively-charged wires. In the theory, the surface of the wire is assumed smooth, whereas in practice stranded wires with an uneven surface are often used. It is shown that the observed corona-current/voltage curve for a stranded wire can be fitted by overlapping segments of 3 different curves of the same form as that theoretically derived for a smooth wire.

A. SCHOFIELD (R)

SA

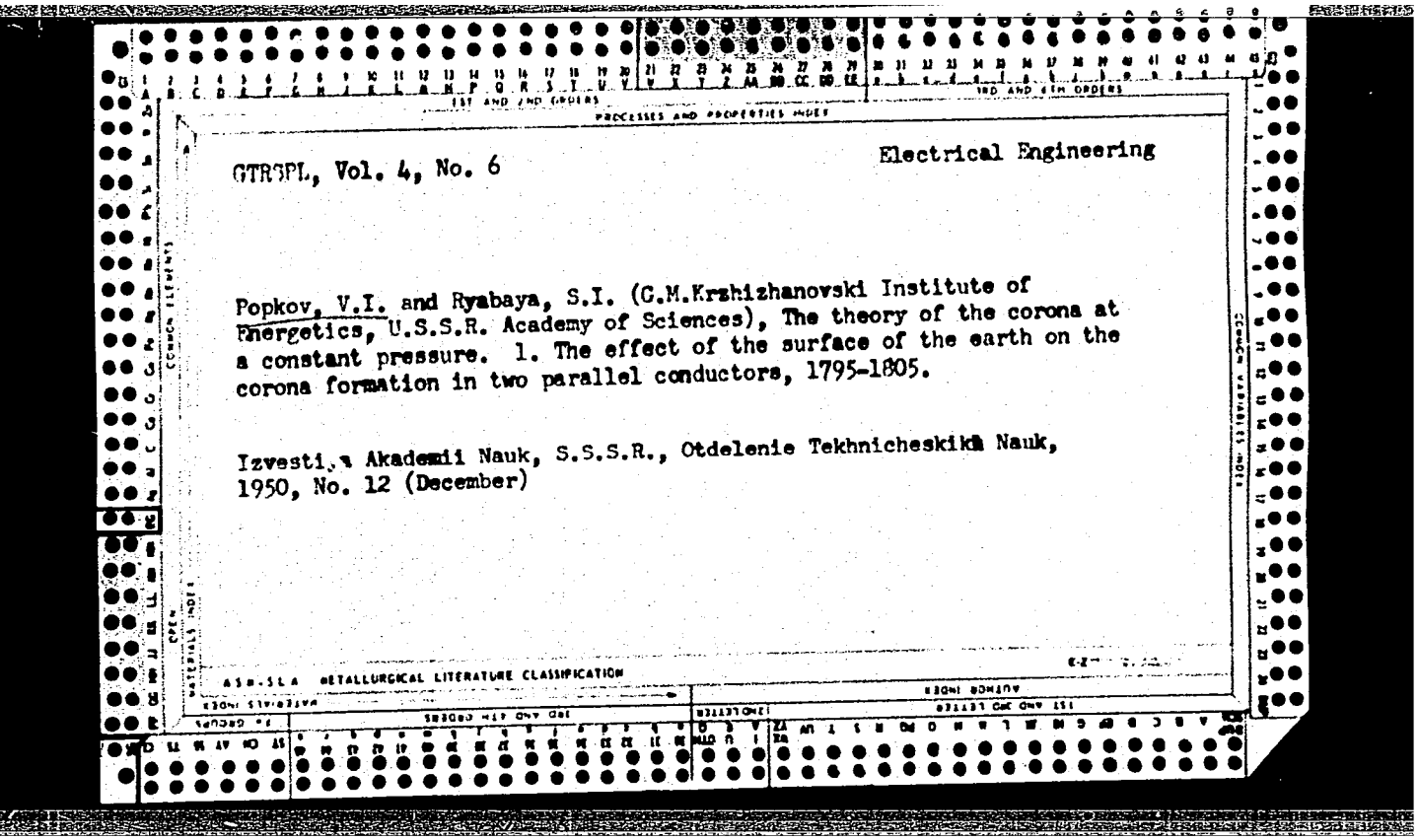
A53

Energ. Inst. im. Krzyzhanovskiy

ASM-SLA METALLURGICAL LITERATURE

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



GTRSPL, Vol. 4, No. 6

Electrical Engineering

Popkov, V.I. and Ryabaya, S.I. (G.M.Krzhizhanovski Institute of Energetics, U.S.S.R. Academy of Sciences), The theory of the corona at a constant pressure. 1. The effect of the surface of the earth on the corona formation in two parallel conductors, 1795-1805.

Izvestiya Akademii Nauk, S.S.S.R., Otdelenie Tekhnicheskikh Nauk, 1950, No. 12 (December)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



POPKOV, V. I.

USSR/Electricity - Transmission, High-Voltage
Corona

Jan 51

"The Theory of DC Corona," V. I. Popkov, S. I. Ryabaya, Power Eng Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 1, pp 29-39

Studies v-amp dependency of corona discharge for syst of 2 parallel conductors with one grounded. Presence of grounded conductor increases current of unipolar corona by 30-50%. Submitted by 8 Jun 50.

184T39

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I. PA 190T46

USSR/Electricity - Transmission Lines, Mar 51
High-Voltage
Corona

"The Problem of Determining the Parameters of a System Representing a Line Subject to Corona," N. B. Bogdanova, V. I. Popkov, Power Eng Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR

"Iz Ak Nauk, Otdel Tekh Nauk No 3, pp 381-389

Shows that corona effect in system representing line subject to corona can be represented by variable distributed corona conductance and variable distributed capacitance connected between the line and ground. Submitted by Acad A. V. Vinter 18 Sep 50.

190T46

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I., Dr.

USSR/Electricity - High-Voltage Sources Oct 51

"A Cascade Generator In Which High-Frequency is Used for Filament Supply of the Kenotrons," V. I. Popkov, Dr Tech Sci, Power Eng Inst imeni Krzhizhanovskiy, Acad Sci USSR

"Elektrichestvo" No 10, pp 3-6

Describes design peculiarities of cascade generators in which high frequency (396 kc) is used for filament supply of the kenotrons (Soviet-produced KR-220's). Two 4-cascade generators were actually built, each having

201T36

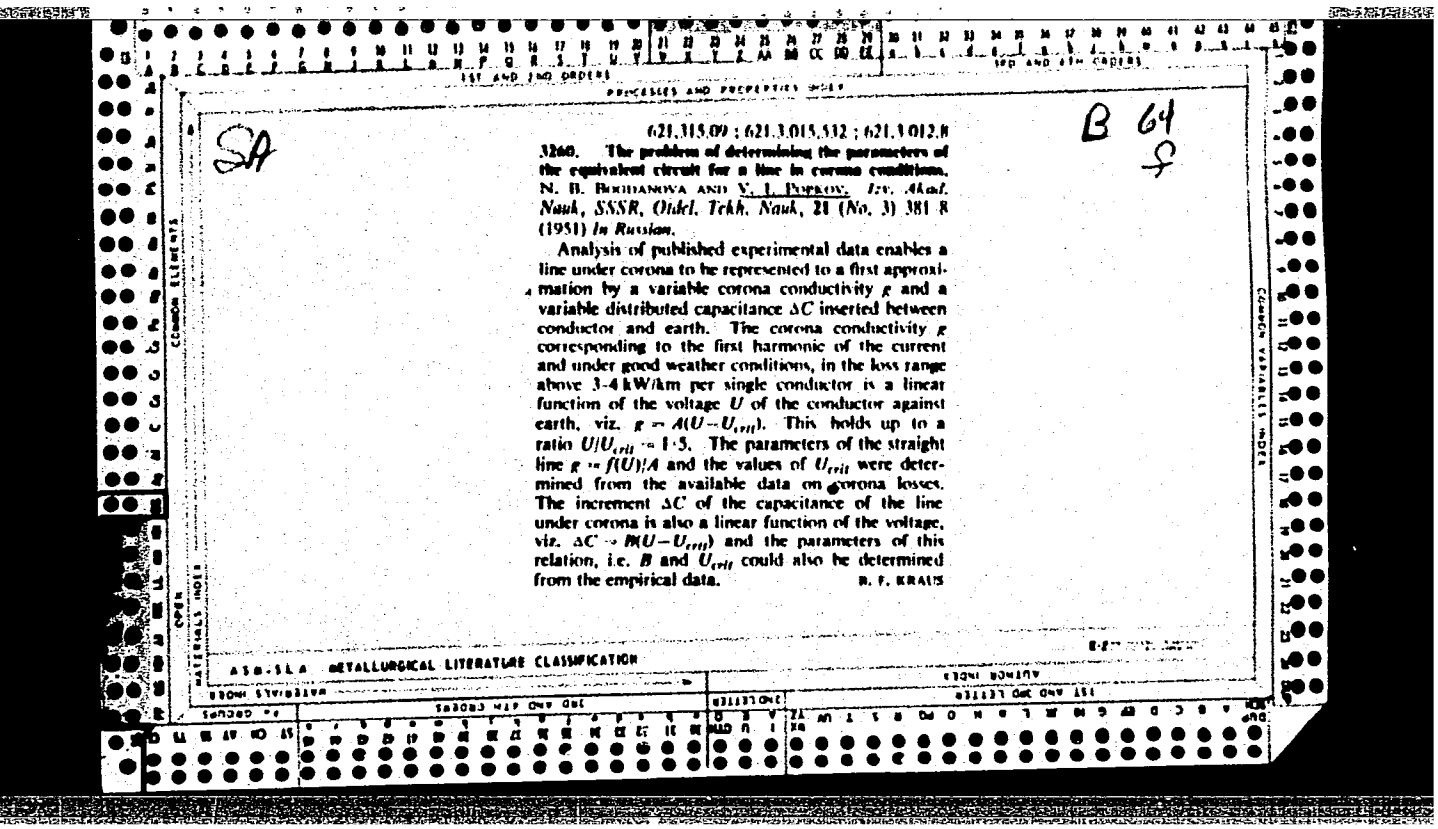
USSR/Electricity - High-Voltage Sources (Contd) Oct 51

16 kenotrons and a voltage of ± 600 kv with respect to ground and 1,200 kv between terminals. Submitted 16 Apr 51.

201T36

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



621.315.09 ; 621.3.015.532 ; 621.3.012.8

3260. **The problem of determining the parameters of the equivalent circuit for a line in corona conditions.** N. B. BOGDANOVA AND V. I. POPKOV. *Izv. Akad. Nauk, SSSR, Otdel. Tekh. Nauk*, 21 (*No.* 3) 381–8 (1951) *In Russian.*

Analysis of published experimental data enables a line under corona to be represented to a first approximation by a variable corona conductivity $g$ and a variable distributed capacitance $\Delta C$ inserted between conductor and earth. The corona conductivity $g$ corresponding to the first harmonic of the current and under good weather conditions, in the loss range above 3-4 kW/km per single conductor is a linear function of the voltage $U$ of the conductor against earth, viz. $g = A(U - U_{crit})$. This holds up to a ratio $U/U_{crit} = 1{\cdot}5$. The parameters of the straight line $g = f(U)/A$ and the values of $U_{crit}$ were determined from the available data on corona losses. The increment $\Delta C$ of the capacitance of the line under corona is also a linear function of the voltage, viz. $\Delta C = B(U - U_{crit})$ and the parameters of this relation, i.e. $B$ and $U_{crit}$ could also be determined from the empirical data. B. F. KRAUS

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Popkov, V.I.

B. T. K.
Vol. 3 No. 3
Mar. 1954
Electrical
Engineering

3187* Theory of Corona Discharge in Gas Under Constant Pressure. General Characteristics of the Unipolar Corona and the Volt-Ampere Dependence Equations for Ground-Wire Electrodes. (Russian.) V. I. Popkov. *Izvestiia Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk*, 1953, no. 5, May, p. 661-674.
Includes graphs, 3 ref.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., doktor tekhnicheskikh nauk; SIDLIK, L.Z., inzhener.

Invention of split wire conductors. Elektrichestvo no.8:67-69 Ag '53.
(MLRA 6:8)

1. Energeticheskiy institut imeni Krzhizhanovskogo Akademii nauk SSSR.
(Electric cables)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

USSR/Electricity FD-1448

Card 1/1 : Pub. 41-2/17

Author : Popkov, V. I., Moscow

Title : Electrical field of transient unipolar corona

Periodical : Izv. AN SSSR, Otd. tekh. nauk 7, 7-12, Jul 1954

Abstract : Describes mechanism of corona discharge and develops formulas which, together with oscillogram of corona current, can be used to determine spatial distribution and variation-with-time of space charge of ions and of voltage of the field during application of unipolar voltage impulse to corona-forming electrode. Diagram; graphs. One reference.

Institution :

Submitted : August 9, 1954

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

KRZHIZHANOVSKIY, G.M.; VINTER, A.V.; POPKOV, V.I.; MARKVARDT, K.G.; KARAULOV, N.A.; MIKHAYLOV, V.I.

Professor V.I.Veits. Elektrichestvo no.5:86 My '55. (MLRA 8:6)
(Veits, Veniamin Isaakovich, 1905- )

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

USSR/ Scientific Organization - Conferences

Card 1/1 Pub. 124 - 26/30

Authors : Popkov, V. I., and Gorushkin, V. I.

Title : Long distance delivery of electric power

Periodical : Vest. AN SSSR 25/7, 123-124, Jul 1955

Abstract : Minutes are presented of a scientific meeting held at the G. M. Krzhizhanovskiy Energetics Institute where problems of rural electrification and long distance electric power delivery were discussed.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

USSR/Physics - Bipolar corona FD - 3170

Card 1/1 Pub. 153 - 26/26

Author : Popkov, V. I.

Title : Problems of the theory of bipolar direct-current corona

Periodical : Zhur. tekh. fiz., 25, No 13 (November), 1955, 2406-2410

Abstract : Problems of the theory of bipolar corona have been investigated by N. A. Kaptsov (Koronnyy razryad [Corona discharge], State Technical Press, 1947), and by the present writer (Izv. AN SSSR OTN, No 4, 1948; DAN SSSR, 59, No 1, 1948), in whose works one may find a bibliography. These works describe theoretically the characteristics of this kind of corona discharge and give experimental investigation of its physical mechanism. Later L. E. Tsyrlin (ZhTF, 23, 10, 1954; 23, 1, 1954) considered the solution of the problem of the volt-ampere characteristics of bipolar corona. The present writer remarks that Tsyrlin's representations concerning the physical mechanism of coronas and treatment of previous works contain deficiencies, which are discussed.

Submitted : November 3, 1955

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I., VOSKRESENSKIY, N.A., BOGDANOVA, N. B., YEMEL'YANOV, N.P., HERTSKI, A.K., and LEVITOV, V. I.

"Investigating A.C. Corona in the Soviet Union," a paper presented at the International Conference on Cigre, 16th Biennial Session and General Assembly Paris, 30 May- 9 June 1956

Translation E-5047 in Branch 5

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

LEVITOV, V.I., kandidat tekhnicheskikh nauk; POPKOV, V.I.

Reactive effect of alternating-current corona. Elektrichestvo no.7:24-29 Jl '56. (MLRA 9:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Popkov) 2. Energeticheskiy institut AN SSSR imeni Krzhizhanovskogo.
(Corona (Electricity))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

KRZHIZHANOVSKIY, G.M.; SHATELEN, M.A.; VINTER, A.V.; KOSTENKO, M.P.; POPKOV, V.I.; NEYMAN, L.R.; BOLOTOV, V.V.; KAMENSKIY, M.D.; ZALESSKIY, A.M.; USOV, S.V.

A.A. Morozov; obituary. Elektrichestvo no.12:88-89 D '56.
(Morozov, Aleksandr Aleksandrovich, d. 1956) (MIRA 11:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

621.315.051 : 621.3.015.533

3346. THE METHOD OF ESTIMATING ANNUAL CORONA LOSSES. V.I.Popkov and N.B.Bordanova. Elektrichestvo, 1957, No. 1, 9-10. In Russian.

Investigations in recent years suggest that the annual energy balance of 400 kV lines is appreciably influenced by the losses during rainy periods. The laboratory investigations of corona were therefore partly carried out in artificial rain of controlled intensity. The discrepancies between laboratory experiments and investigations on experimental lines were partly due to the fact that in the latter case the experimental conditions could not be varied at will, so that the former were in this respect more [illegible] than the latter. Laboratory experiments were carried out [illegible] particular care was taken to eliminate the influence of all the [illegible] losses, e.g. on insulator strings and fittings, potential screens and tumors, and to obtain purely the corona losses on conductors under various conditions, including rain from 0.01 to 3 mm/min intensity, ice and snow. The results were then applied to meteorological data for all the climatic regions of the U.S.S.R. The method of evaluation is partly based on Cahen and Pelissier's procedure published in CIGRE reports, with some original improvements by the authors.

B.F.Kraus

MT

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

19. Space Charge Movement in Alternating Current Corona

"Experimental Investigation of the Space Charge Movement in the Corona Field of an Alternating Current," by V. I. Levitov, A. G. Lyapin, and V. I. Popkov, Power Engineering Institute, Academy of Sciences USSR, Izvestiya, Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, No 1, Jan 57, pp 14-32

Results of the work are summarized as follows;

"1. It was experimentally proved that the presence in the outer zone of the alternating current corona of a space charge drift zone, in which the ions have an oscillating forward motion, leads to a gradual departure of the ions from the conductor surface. The life time of the space charge in the drift zone, according to experimental data,



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

may attain 25 periods (0.5 sec) from the moment of its evolution for a source frequency of 50 cycles.

"2. The maximum radii of the space charge escape front are determined for one, 3, and 5 half-life periods of the ions.

"3. The approximate stability of the front's velocity (and consequently the potential at the front) for the ion traveling wave was established in the time intervals of corona glowing." (U)

Sum 1439

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I.

VINTER, A.V.; VEYTS, V.I.; POPKOV, V.I.; MARKIN, A.B.

Revolutionery, scholar and outstanding Soviet power engineer; on the 85th birthday of G.M.Krzhizhanovskii. Elektrichestvo no.1: 79-80 Ja '57. (MLRA 10:2)
(Krzhizhanovskii, Gleb Maksimilianovich, 1872-)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

AUTHOR: POPKOV, V.I. PA - 2143

TITLE: On the Critical Gradients of a Corona Discharge. (K voprosu o kriticheskikh gradiyentakh korony. Russian)

PERIODICAL: Zhurnal Tekhn.Fiz.1957, Vol 27, Nr 2, pp 413-417 (U.S.S.R.)

Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: POPKOV criticizes TIKHODEEV and ALEKSANDROV because, though describing statements as wrong, they make no statement themselves as to the problem of the critical gradient $E_{kr}$. POPKOV then shows that neither the raising of the problem concerning $E_{kr}$ nor the manner in which it was dealt with are connected in any way with the experiments carried out by PIK. The essential points concerning the statements made in T 25, Vol 13 on the paper by L.E.TSYRLIN in Zhurnal Tekhn.Fiz. 25, Vol 10 are the following: If an equation which is only an approximation to a physical process is compared with an experiment, the $E_{kr}$ obtained from such a comparison can, because of the inaccuracy of the equation, be looked upon only as a computation parameter of the equation and not as a physically substantiated quantity as long as $E_{kr}$ has not been independently confirmed. As the next point POPKOV maintains that the investigation of the field of the bipolar corona carried out by himself with the aid of probes does not confirm the assumption of the predominance of the positive space charge in the exterior zone and the inferior part played

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



by recombination of the ions, and that it established the fact of a rather symmetric distribution of the density of both positive and negative ions as well as the essential part played by their recombination. He was able numerically to estimate the ratio of the density of both positive and negative ions and thus also to attempt evaluation of the decrease of $E_{kr}$. This also led to the conclusion that $E^{+}_{kr}$ decreases more than $E^{-}_{kr}$. The $E_{kr}$ determined as well as computations carried out according to the equation (1) agree with the predictions of the hypothesis of N.A.KAPTSOV. Therefore, the determination of $E_{kr}$ from the experiment on the basis of an approximated equation is absolutely not the only source of the knowledge obtained with respect to this quantity. It is further shown that the difference of opinion with respect to $E_{kr}$ is purely of a numerical nature. In conclusion it is said that any conclusions drawn as to the "incorrectness" of the hypotheses investigated are without foundation.

**ASSOCIATION:** Institute for Energies "KRZHIZHANOVSKIY, Moscow
**PRESENTED BY:**
**SUBMITTED:** 29.3.1956
**AVAILABLE:** Library of Congress



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I., BOGDANOVA, N. B., GERTSYK, A. K., YEMELYANOV, N. P., KOLPAKOVA, A. I., MARKOVICH, I. M., SOVALOV, S. A., and SLAVIN, G. A.

Results of Some Researches, Carried out in the USSR on 600 kV long-distance Power Transmissions.

paper submitted for presentation at the Intl. Conf. on Large Electric Systems (CIGRE) 17th Biennial Session, Paris, France, 4-14 June 1958.

Electra, No. 30, Nov 57, periodical news letter issued by the CIGRE, Paris France.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I.

AUTHOR: None Given 30-58-5-6/36

TITLE: Discussion on the Report of Activity (Preniya po otchetnomu dokladu)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, Nr 5, pp 29-31 (USSR)

ABSTRACT: I. V. Tyurin, Member, Academy of Sciences, USSR devoted his speech to some results of activity of the Soil Institute imeni V.V. Dokuchayev. A. L. Kursanov, Member, Academy of Sciences, USSR spoke on the participation of the AS USSR in the international exhibition 1958 in Brussels. K. V. Ostrovityanov, Member, Academy of Sciences, USSR spoke on some success in the field of social sciences, but at the same time also pointed out a certain backwardness. V. V. Belousov, Corresponding Member, Academy of Sciences, USSR reported on the participation of Soviet scientists in the works of the Geophysical Year. V. I. Popkov, Corresponding Member, Academy of Sciences, USSR, emphasized the importance of the works of the Institutefor Power Engineering imeni G. M. Krzhizhanovskiy. G.A. Chebotarev, Director of the Library of the AS USSR spoke on the participation of this collective in the establishment of a large academic library in No-

Card 1/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



vosibirsk. V. G. Bogorov, Director of the Institute for Oceanology, emphasized the importance of the oceanographic research works. V. V. Vinogradov, Member, Academy of Sciences, USSR, severely criticized the deficiencies in the development of social sciences in the AS USSR, and he emphasized the difficulty of publishing studies. V. A. Ambartsumyan, Member, Academy of Sciences, USSR reported on important problems of the development of Soviet astrophysics. V.A. Engel'gardt, Member, Academy of Sciences, USSR emphasized the unsatisfactory position of the institutes in the department for biological sciences. Ye. M. Zhukov, Corresponding Member, Academy of Sciences, USSR spoke on achievements, shortcomings and tasks of social sciences. A. I. Nazarov, Director of the Publisher of the AS USSR spoke on serious difficulties in the work of this publisher, where he also criticized those institutes which send to the press blown-up and unfinished material. V.F. Kuprevich, Corresponding Member, Academy of Sciences, USSR spoke on important tasks of biological science and emphasized the necessity of training young physicists and chemists for this work, in which he was supported by R.D. Obolentsev, Chairman of the Presidium of the Bashkiriya Branch. A. V. Sidorenko, Chairman of the Pre-



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

Discussion on the Report of Activity

30-58-5-6/36

sidium of the Kola Branch spoke on the cooperation with the Murmansk Council of Economy, The report of activity of the AS USSR for the year 1957 was approved, the assembly recommending to the Presidium of the Academy as well as to the Office of the Departments to consider the critical remarks and proposals in the precise determination of the plan for 1958.

1. Scientific research--USSR 2. Scientific reports--USSR

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V. I. (Correspondent-member AS USSR)

"A Unique Energetic System in the USSR"

Lecture to be delivered by Soviet Scientists at the Brussels Exhibition, August 1958. The delivered lectures will be available in English, French, Flemish and German as individual brochures.
(Priroda, 1958, N . 8, p. 116)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V.I., otv.red.; VINTER, A.V., akademik, red. [deceased]; VEYTS, V.I., red.; PREDVODITELEV, A.S., red.; STYRIKOVICH, M.A., red.; CHUKHANOV, E.F., red.; BOGDANOVA, N.B., kand.tekhn.nauk, red.; KOZLOV, B.K., kand.tekhn.nauk, red.; LEBEDEV, M.M., kand.tekhn. nauk, red.; SUNDUKOV, I.N., kand.tekhn.nauk, red.; ANTRUSHIN, B.D., red.izd-va; DUBKOV, P.V., red.izd-va; ZUBKOV, P.I., red. izd-va; MOYZHES, S.M., red.izd-va; PRUSAKOVA, T.A., tekhn.red.

[Problems of power engineering; symposium dedicated to Academician G.M.Krzhizhanovskii] Problemy energetiki; sbornik posviashchaetsia akademiku G.M.Krzhizhanovskomu. Moskva, 1959. 851 p. (MIRA 12:12)

1. Akademiya nauk SSSR. Energeticheskiy institut. 2. Chleny-korrespondenty AN SSSR (for Popkov, Veyts, Predvoditelev, Styrikovich, Chukhanov).

(Power engineering)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

POPKOV, V-I

28

PHASE I BOOK EXPLOITATION SOV/5494

Vasil'yev, Mikhail Vasil'yevich, and Sergey Zakharovich Gushchev

Rasskazy iz XXI veka; my zapisali rasskazy dvadtsati devyati sovetskikh uchenykh o nauke i tekhnike budushchego (Reports From the Twenty-First Century; Stories of Twenty-Nine Soviet Scientists on Science and Engineering of the Future) [Moscow] Izd-vo Sovetskaya Rossiya, 1958. 243 p. 50,000 copies printed.

Ed.: V. A. Golubkova; Tech. Ed.: G. I. Kleyeva.

PURPOSE: This book is intended for the general reader.

COVERAGE: The book contains 27 articles (told reporters by Soviet scientists) dealing with probable future progress in physics, chemistry, electricity, metallurgy, engineering, agriculture, zoology, transportation, mining, medicine, biology, photography. Attention is given to exploration of space, and industrialization of coal, use of automation, automatic underground gasification of oil fields, atomic electric stations, new metals, modernization of oil fields, atomic electric stations, production of metal parts by the process of explosion, explosions in dam construction, cancer, internal longevity reserves, machine diagnoses of illnesses, surgery vs. treatment by ultrasonic vibrations, mechanical heart substitutes, human body banks, "medical engineering," enriched fodder, "superfertilizers", artificial snowfalls, agriculture vs. intellectual work, "AP automobiles" (with "radio motors"), "artificial sun" (electromagnetic rays focused above a city which cause heated nimbus to shine), future ocean ships, "railway dreadnoughts", Moscow of the future, moving pavements, wheelless and driverless automobiles, electric cabins, the industrialization of Siberia, use of underground heat, climate controlling on the moon, antimatter, and photon jet. Names of the interviewed scientists are given. There are no references.

Card 1/7

TABLE OF CONTENTS:

INTRODUCTION 5

Reports From the Twenty-First (Cont.) SOV/5494

Mission Into the Future 10

Learn to Dream [A. N. Nesmeyanov, Academician]

THE FUNDAMENTAL AND MOST IMPORTANT THINGS

Transformation of Elements -- the Future of Metallurgy [I. P. Bardin, Academician, Vice-President, AS USSR] 25

Mines Are Breathing Their Last [N. S. Garkusha, Director of Vsesoyuznyy nauchno-issledovatel'skiy institut "Podzemgaz" -- All-Union Scientific Research Institute of Underground Gasification of Coal -- and N. A. Fedorov, Deputy Director for the Scientific Section] 34

Automatic Oil Field [S. I. Mironov, Academician, and M. A. Kapelyushnikov, Corresponding Member, AS USSR] 45

From the Sources [A. V. Vinter, Academician] 51

Card 2/7

Reports From the Twenty-First (Cont.) SOV/5494

Card 3/7

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8



Power Resources in the Year 2007 [V. I. Popkov, Corresponding Member, AS USSR] 55

Farkhad's New Hammer [G. I. Pokrovskiy, Professor] 61

IN THE NAME OF LIFE AND PLENTY

Biology Will Become an Exact Science [V. A. Engel'gardt, Academician, Head of the Biology Department, AS USSR] 73

Tale About Bloodless Surgery [M. G. Anan'yev, Candidate of Medical Sciences, Director of the Institut eksperimental'noy khirurgicheskoy apparatury i instrumenta -- Institute of Experimental Surgical Apparatus and Instruments] 77

The Golden Age of Plenty Is Coming [S. I. Vol'fkovich, Academician] 88

At One Table With Poseidon [L. A. Zenkevich, Corresponding Member, USSR, Chief of the Department of Zoology of Invertebrates of the Faculty of Biology at Moscow University] 96



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8

24(3) SOV/48-23-8-11/25

AUTHORS: Levitov, V. I., Lyapin, A. G., Popkov, V. I.

TITLE: Field Investigation of an Alternating-current Corona by Means of a Search Electrode

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 8, pp 980-988 (USSR)

ABSTRACT: A short theory of investigation by means of a search electrode is given in the present paper. A differential search electrode consisting of two similar electrodes is first described. The authors demonstrate how the discharge is not influenced by the probe, and discuss the whole measuring arrangement with the help of figure 1. In the following, the volt-ampere characteristic of the differential search electrode is discussed. The diagrams of figures 3 and 4 illustrate the volt-ampere characteristics for eight different angles. The influence exerted by space charge upon the mobility of the ions and the amount of the spatial potential are determined from the characteristic. The diagram of figure 9 illustrates the maximum space-charge density in dependence upon the distance. The diagram of figure 10 shows the spatial potential for various

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342220018-8"