"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

ABKHAZI, V.I.; ANTONOV, V.Ya.; BELOKOPYTOV, I.Ye.; VARENTSOV, V.S.; GORYACHKIN, V.G.; ZYUZIN, V.A.; KRYUKOV, M.N.; KUZHMAN, G.I.; OZEROV, B.N.; RIVKINA, Kh.I.; SEMENSKIY, Ye.P.; SOKOLOV, A.A.; SOLOPOV, S.G.; STRELKOV, S.S.; TYUREMNOV, S.N.; CHULYUKOV, M.A.

Sergei Alekseevich Sidiakin. Torf.prom. 38 no.2:40 '61. (MIRA 14:3)
(Sidiakin, Sergei Alekseevich, 1897-1960)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

BULYNKO, M.G., kand.tekhn.nauk; SOKOLOV, A.A., kand.tekhn.nauk;
KROPP, A.Ye., inzh.

Mechanical dehydration of upland peat for the production of peat litter. Torf. prom. 38 no.8:13-15 '61. (MIRA 14:12)
(Peat machinery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

BULYNKO, Mikhail Grigor'yevich; IVANOV, Viktor Nikolayevich; SARMATOV, Mikhail Ivanovich [deceased]; SOKOLOV, A.A., red.; LARIONOV, G.Ye., tekhn. red.

[Briquetting of peat] Briketirovanie torfa. Moskva, Gosenergoizdat, 1962. 303 p. (MIRA 15:7)
(Peat) (Briquets (Fuel))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.; TSUPROV, S. A.

"Winning and utilization of peat."

Report submitted for the 2nd International Peat Congress, Leningrad, 15-22 Aug 63.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., kand.tekhn.nauk; ZAKHAROV, A.G., inzh.; VASIL'YEV, V.I., inzh.

Bibliography. Torf.prom. 40 no.5:37-40 '63. (MIRA 16:8)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Bibliography--Peat industry)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

ANDREYEV, Georgiy Yefimovich, kand.tekhn.nauk; SOKOLOV, Aleksey Alekseyevich, inzh.; PUSHKIN, Petr Sergeyevich, kand.tekhn.nauk; SERGEYEVA, A.I., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[Use of electric power for track maintenance operations] Opyt elektrosnabzheniia putevykh rabot. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 110 p. (MIRA 13:9)

(Railroads--Maintenance and repair) (Railroads--Electric equipment)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

Planning a psychiatric hospital. Zh. nevropat, psikhiat., Moskva 52 no.5:59-63 May 1952. (CLML 22:2)

1. Of the Psychiatric Hospital imeni Kashchenko of Leningrad Municipal Public Health Department (Head Physician -- N. D. Bulkin).

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Providing advanced training for physicians. Zhur. nevr. i psikh 59 no.3:383 '59. (MIRA 12:4)
(VALDAY--PHYSICIANS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.

Letter to the editor. Zhur.nevr. i psikh. 59 no.8:1023-1024 '59.
(MIRA 12:12)

(SCHIZOPHERNIA)

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GOL'DIN, L.S., SOKOLOV, A.A.; KOMISSARCHIK, Ya.Yu.

Ultramicrotome on conic supports. TSitologiia 2 no.3:374-376 My-Je '60. (MIRA 13:7)

1. Laboratoriya elektronnoy mikroskopii Psikhonevrologicheskogo instituta, Leningrad.

(MICROTOME)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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SOKOLOV, A.

Extension of psychoneurological care in Novgorov Province. Zhur. nevr.i psikh. 60 no.1:123 '60. (MIRA 13:6)
(NOVGOROD PROVINCE--PSYCHIATRIC HOSPITALS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Some prerequisites for the organization of scientific work in the area of a psychoneurological hospital. Zhur. nevr.i psikh. 60 no.10:1373-1377 '60. (MIRA 14:1)

1. Valdayskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach A.A. Sokolov).
(PSYCHIATRIC HOSPITALS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.

In defense of clinical study in connection with the discussion of febrile schizophrenia. Zhur. nevr. i psikh 61 no.8:1274-1275 '61. (MIRA 15:3)

(SCHIZOPHRENIA)

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SOKOLOV, A.A. (Valday)

Specialized training for physicians at local bases. Zhur. nevr. i psikh. 61 no.9:1433-1434 '61. (MIRA 14:9)
(PSYCHIATRY--STUDY AND TEACHING)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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SOKOLOV, A.A. (Valday)

Once more on specialization in local areas. Zhur. nevr. i psikh. 62 no.4:637-639 '62. (MIRA 15:5)
(PSYCHIATRY--STUDY AND TEACHING)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A. (Valday)

Dr. F.A. Usol'tsev's hospital for neurological, mental and alcoholic patients. Zhur. nevr. i psikh. 62 no.5:768-771 '62. (MIRA 15:6)

(PSYCHIATRIC HOSPITALS)
(USOL'TSEV, FEDOR ARSEN'EVICH, 1863-1947)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

BRO, G.; SOKOLOV, A.A.; SITNIKOV, Ye.

Problems in neuropathology and psychiatry. Zhur.nerv.i psikh. 62 no.6:942-945 '62. (MIRA 15:11)
(PSYCHIATRY) (NERVOUS SYSTEM—DISEASES)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., inzh.; SUKHOV, I.V., inzh., red.; GVIRTS, V.L., tekhn.red.

[Mechanizing the disassembling of removable pressmolds] Mekhanizatsiia razborki s'emnykh pressform. Leningrad, 1955. 5 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskii listok, no.47(735)) (MIRA 10:12)

(Plastics--Molding)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, Aleksandr Aleksandrovich; BOSYY, Georgiy Fedorovich; ROMANOVSKIY, V.P., kand.tekhn.nauk dots., red.; NEDOREZOV, V.Ye., kand.tekhn. nauk red.; KAPLANSKIY, Ye.F., red.izd-vo; POL'SKAYA, R.G., tekhn. red.

[Extrusion of complex-shaped parts] Vytiazhka detalei slozhnoi formy. Pod obshchei red. V.P.Romanovskogo. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1955. 59 p. (Bibliotechka shtampovshchika, no.5) (MIRA 11:6)
(Extrusion (Metals))

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, Aleksandr Aleksandrovich, inzh.; SUKHOV, I.V., inzh., red.; GVIRTS, V.L., tekhn.red.

[Universal blocks for pressing thermosetting plastic materials] Universal'nye bloki dlia pressovaniia termoreaktivnykh plastmass. Leningrad, 1956. 18 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskii listok, no.4. Kholodnaia shtampovka) (MIRA 10:12)

(Plastic industry)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., inzhener.

Practice of using universal stamp dies. [Izd.] LONITOMASH vol.40: 217-227 '56. (MLRA 10:4)
(Sheet metal work) (Dies (Metalwork))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.; PANTYUSHIN, S.V.

Russian engraved-roller printing machine. Tekst.prom. 18 no.12:41-42 D '58. (MIRA 11:12)

(Textile printing)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

BELYAYEV, Yu.V.; SOKOLOV, A.A.

New methods of determining the velocity of hammer strokes.
Kuz.-shtam. proizv. 1 no.9:21-23 '59. (MIRA 12:12)
(Forging machinery--Testing)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, Aleksandr Aleksandrovich (1885-) ; STEPANOV, A.Ya.

[Finance and credit of the machinery industry] Finansovanie i kreditovanie mashinostroitel'noi promyshlennosti. Moskva, Mashgiz, 1960. 247 p. (MIRA 14:12)
(Machinery industry--Finance)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

1504. On the Use of Receiving Valves in Electronic Automatic Circuits. A. A. Sokolov (Izvestiya Telemekhaniki [in Russian], No. 3, 1941, pp. 159-161.)

The great demand for multi-electrode valves in automatics and telemechanics is pointed out and it is shown that the existing types are generally not suitable for this purpose. The main requirement imposed on the valves is that the electrodes should not be interconnected inside the bulb. This refers in particular to the cathodes

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

SA

B 69
6

Electromechanical "logometer." SOKOLOV, A. A., AND PANTELEEVA, A. D. *Elektrichestvo* (*No.* 1) 57–8 (1947) *In Russian.*—A logometer is defined as an instrument for measuring the ratio of two varying values of the same physical parameter (i.e. dynamometer). A simple instrument is proposed consisting of two high-value linear resistors with mechanically ganged but insulated sliders, operated manually or automatically, in combination with a standard voltage source and a voltmeter. It is shown how it yields the product, ratio, square or square root of one or two voltages applied. A. L.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

42029 SOKOLOV, A. A. ; MUKHTAROV, A. I. - K teorii annigilyatsii elektronov i pozitronov. Vestnik mosk. Un-ta. 1948, No. 8, s. 63-76.- Bibliogr: 8 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

PA 22/49T13

SOKOLOV, A. A.

USSR/Electricity
Voltage - Measurements

Oct 48

"Inversion Method for Measuring High DC Voltages," A. A. Sokolov, Cand Tech Sci, A. M. Litvinov, Engr, Moscow Power Eng Inst imeni Molotov, 2 pp

"Elektrichestvo" No 10

Describes method in detail, with four diagrams.

22/49T13

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., kandidat tekhnicheskikh nauk.

Bases of applied electronics. Elektrichestvo no.1:13-16 Ja '49. (MLRA 7:10)

1. Moskovskiy energeticheskiy institut im. Molotova.
(Electronics)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

21719 SOKOLOV, A.A. Elektronnyye indikatory ekstremuma. Trudy Mosk. Energet. In-Ta im. Molotova. VYP. 4, 1949, S. 34-46 Bibliogr: 7 Nazv.

SO: Letopis'Zhurnal'nykh Statey, No. 29, Moskva, 1949

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

27089 SOKOLOV, A. A. Organizatsiya laboratornogo praktikuma po bystro razvivayu-
shcheysya distsipline. (Prikladnaya elektronika. S primech. red., s. 18).
Vestnik vyssh. shkoly, 1949, No.7, s. 26-31.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

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SOKOLOV, A.

26926 - SOKOLOV, A. Kvantovaya teoriya "svetyashchegosya" elektrona. Doklady akad nauk. SSSR novaya seriya, T. LXVII, No. 6 1949, s. 1013-16 bibliogr: 6 nazb

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

PA 171T56

USSR/Electronics - Trigger Circuits Oct 50
Electron Tubes

"Relay DC Amplifiers," Docent A. A. Sokolov, Cand Tech Sci, Moscow Power Eng Inst imeni Molotov

"Elektrichestvo" No 10, pp 72-83

Describes generally principles and peculiarities of various types of trigger circuits using electron tubes.

171T56

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A. A.

SOKOLOV, A.A.

Calculation of the optimal automatic displacement. Sbor.nauch.rab. Mekh.inst. no.3:84-86 '52. (MLRA 8:3)
(Rotating amplifiers)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

SOKOLOV, A.A.

A D-C amplifier with asymmetric input and symmetric output. Sbor. nauch.rab.Mekh.inst. no.3:87-89 '52. (MLRA 8:3)
(Amplifiers, Electron-tube)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

USSR/Electronics - Instruments Feb 53

"An Instrument for Measuring the Capacitance of Electrolytic Capacitors," A. Sokolov, Novorossiysk

"Radio," No 2, p 52

The unit consists of a half-wave selenium rectifier, an instrument transformer, an autotransformer and a galvanometer and is used in a 110 or 220-v ac circuit. Two taps on the autotransformer are used, one for capacitances from 1 to 40 pico-farads and the other for capacitances from 30 to 200 pico-farads.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., (Moskva)

Symmetrical parallel-balanced d.c. repeater. Avtom. i telem. 14 no.2:199-206 Mr-Ap '53. (MLRA 10:3)
(Amplifiers, Electron-tube)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.

USSR/Electricity - Literature Mar 53

"New Books on Electricity, Electrical Engineering, and Electric Power Engineering, Published in 1952"

"Elektrichestvo", No 3, p 96

Lists 28 titles published in 1952, including 3 translations from English and the following: "Quantum Field Theory" (Kvantovaya teoriya polya), 780 pp, by A. Sokolov and D. Ivanenko; "Electromechanical Automatic Control Systems" (Elektromekhanicheskiye sistemy avtomaticheskogo upravleniya), 252 pp, by T. N. Sokolov; and "Wind-Driven Motors and Their Use in Agriculture" (Vetrodvigateli i ikh primeneniye v sel'skom khozyaystve), 272 pp, by Ye. I. Fateyev.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

May 53

USSR/Electronics - Communications
Radio Relay Lines

SOKOLOV, A.

"Receiving and Transmitting Installations of Radio Relay Communications Lines,"

A. Sokolov

Radio, No 5, pp 10-14

Gives introductory block diagrams and explanation of radio relay lines and then discusses the separate elements of a radio relay station, e.g., rf stages of transmitters, modulators, crystal mixers, wide-band amplifiers, etc. Another article will be published on methods of modulation used in radio relay lines.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.(Moskva)

Maximum input signals of d.c.amplifiers. Avtom. i telem. 14 no.3:336 My-Je '53. (MLRA 10:3)

(Amplifiers, Electron-tube)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Automatic electronic control. Nauka i zhizn' 20 no.12:17-20 D '53. (MLRA 6:12)

(Electronic control)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Electronic "summators." Sbor.nauch.rab. MIFI no.9:121-131 '55. (MLRA 10:1)

(Electronic calculating machines)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

Sokolov, A. A.

FD-1748

USSR/Electricity - Repeaters

Card 1/1 : Pub. 10-7/12

Author : Sokolov, A. A. (Moscow)

Title : Parallel balanced repeaters

Periodical : Avtom. i telem., Vol. 16, 196-202, Mar-Apr 1955

Abstract : The author gives computational equations for a symmetric repeater with large oscillation, an asymmetric repeater and asymmetric repeater with large oscillation. He derives calculation of the displacement necessary for increase of allowable input signals and for optimum utilization of tubes. He points out the relations of resistances required for regimes of maximum sensitivity with respect to power and for a regime of maximum power at load in the case of maximum input signal. The author presents graphs in those cases where the computational formulas are too complicated. Three references (A. A. Sokolov, Nos 2 and 3, Vol. 14, 1953; V. A. Trapeznikov and A. Ya. Lerner, No 5, Vol. 13, 1951, ibid.).

Institution : -

Submitted : February 15, 1954

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

[illegible], A. [illegible]

[illegible], [illegible]: "Principles of the theory and calculation of electronic DC amplifiers." Inst. of Automechanics and Telemechanics. Acad Sci USSR. Moscow, 1956. (Dissertation for the Degree of Doctor in Technical Sciences).

Source: Kibernetika Izbornik' No. 28 1956 Moscow

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.; VLASENKO, V.I.; GURVICH, A.Ye.; STAROSEL'TSEVA, L.K.

Photoelectric densitometer and its use in evaluating the results of paper electrophoresis. Vop.med. khim. 2, no.3:222-228 My-Je '56. (MLRA 9:10)

1. Inzhenerno-fizicheskiy institut i Laboratoriya fiziologicheskoy khimii Instituta biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.

(ELECTROPHORESIS, apparatus and instruments, densitometer, photelectric (Rus))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

Sokolov, A.A.

Category : USSR/General Problems - Method and Technique of Investigation A-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 2897

Author : Korol'kov, V.I., Sokolov, A.A.
Title : Hungarian Instrument Building Exhibition of 1955.

Orig Pub : Izmerit. tekhnika, 1956, No 3, 88-90

Abstract : The exhibition contained electronic instruments used in electrical engineering, radio, chemistry, medicine, metallurgy, and agriculture, as well as laboratory equipment and means of automation and control. Brief descriptions are given for several measuring instruments.

Card : 1/1

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Principal defects of the S-type d.c. electronic regulators.
Priborostroenie no.10:12-13 O '56. (MLRA 9:12)
(Electronic instruments)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A. (Moskva)

Bridge-balanced electronic D.C. amplifier stages. Avtom.i telem. 17 no.4:353-361 Ap '56. (MLRA 9:8)
(Amplifiers, Electron-tube)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.

Semiconductor triode as an active four-terminal network in its three standard connections. Nauch.dokl.vys.shkoly; radiotekh. i elektron. no.1:250-254 '58. (MIRA 12:1)

1. Kafedra poluprovodnikovykh priborov Moskovskogo energeticheskogo instituta.
(Transistors)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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SOKOLOV, A.A.

PANTYUSHIN, S.V., inzh.; SOKOLOV, A.A., kand. tekhn. nauk.

Magnetic modulation of phototube currents. Svetotekhnika 4 no.5: 23-26 My '58. (MIRA 11:5)

(Photoelectric cells)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.; ALEKSANDROV, V.I.

Electronic analytic balances. Izm.tekh. no.5:24-25 S-O '58. (MIRA 11:10)

(Balance) (Electronic instruments)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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Elementy sistem avtomaticheskogo regulirovaniya. ch. 1: Chuvstvitel'nyye usilitel'nyye i ispolnitel'nyye elementy (Elements of Automatic Control Systems. pt. 1: Sensing, Amplifying and Control Elements) Moscow, Mashgiz, 1959. 722 p. (Series: Osnovy avtomaticheskogo regulirovaniya, t 2) Errata slip inserted. 13,000 copies printed.

Reviewers: F. F. Galteyev, Candidate of Technical Sciences, V. A. Karasev, Doctor of Technical Sciences, P. P. Klobukov, Candidate of Technical Sciences, V. V. Petrov, Candidate of Technical Sciences, Yu. D. Ragozin, Candidate of Technical Sciences, Yu. R. Reyngol'd, Engineer, B. A. Ryabov, Doctor of Technical Sciences, B.D. Sadovskiy, Candidate of Technical Sciences, A. G. Saybel', Candidate of Technical Sciences, and A. A. Shevyakov, Candidate of Technical Sciences; Scientific Eds.: I. M. Vitenberg, Candidate of Technical Sciences, A. I. Moldaver, Candidate of Technical Sciences, and Yu. Ye. Ruzskiy, Candidate of Technical Sciences; Ed. of Series: V. V. Solodovnikov, Doctor of Technical Sciences, Professor; Eds. of Publishing House: G. F. Polyakov, A. G. Akimova, and G. M. Konovalov; Tech. Eds.: A. Ya. Tikhanov and T. F. Sokolova; Managing Ed. for Literature on Machine Building and Instrument Construction (Mashgiz): N. V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for engineering and scientific personnel and for instructors of vtuzes concerned with problems of automatic control.

COVERAGE: The authors explain the principle of operation of automatic control elements and servomechanisms. They also discuss typical automatic control circuits and present equations of motion and static and dynamic characteristics of automatic control elements. They describe sensing elements, amplifiers, control elements and transducers. The book contains Sections I, II, and III of Part 1, Volume II, "Principles of Automatic Control." The following persons participated in writing the present work: D. A. Breslavskiy, Candidate of Technical Sciences, paragraph 4 of Chapter III and paragraphs 1-8 and 14 of Chapter IV; L. S. Gol'dfarb, Doctor of Technical Sciences, paragraphs 1, 2, 6 and 7 of Chapter I; A. I. Guzenko, Candidate of Technical Sciences, paragraph 1 of Chapter VIII; K. Ye. Dmitriyev, Candidate of Technical Sciences, paragraph 2 of Chapter XIII; V. A. Kalashnikov, Engineer, Chapter XIV; P. P. Klobukov, Candidate of Technical Sciences, paragraphs 2 and 3 of Chapter VIII; P. P. Klubnikin, Candidate of Technical Sciences, Chapter XII; L. M. Krassov, Candidate of Technical Sciences, paragraph 1 of Chapter XIII, and Chapter XIV; D. S. Pel'por, Doctor of Technical Sciences, paragraphs 1-3of Chapter III; V. V. Petrov, Candidate of Technical Sciences, paragraph 1 of Chapter XIII, and Chapter XIV; M. A. Rozenblat, Doctor of Technical Sciences, Chapter VII; Yu. Ye. Ruzskiy, Candidate of Technical Sciences, paragraphs 1, 3-5 and 8-10 of Chapter 1, paragraphs 2-5, 12, 13 and 17 of Chapter II, paragraph 3 of Chapter XIII, and Chapter IX; B. D. Sadovskiy, Candidate of Technical Sciences, paragraphs 1 and 2 ofChapter X; A. A. Sokolov, Candidate of Technical Sciences, Chapter VI; V. K. Titov, Candidate of Technical Sciences, paragraphs 9-13 of Chapter IV, paragraph 4 of Chapter X, and Chapter XI; G. M. Ulanov, Candidate of Technical Sciences, paragraph 1 of Chapter II; Ye. V. Filipchuk, Candidate of Technical Sciences, paragraphs 6-11, 14-16 and 18-29 of Chapter II; A. Ye. Kharybin, Candidate of Technical Sciences, Chapter V; and V. A. Khokhlov, Candidate of Technical Sciences, paragraph 1 of Chapter IX and paragraph 1 of Chapter XIII. References appear at the end of each chapter.

TABLE OF CONTENTS:

Introduction 1

SECTION I. SENSING ELEMENTS· TRANSDUCERS, MODULATORS AND DEMODULATORS 4

Ch. I. Sensing Elements for Measuring Electrical Quantities 6
1. Bridge sensing elements 6
2. Electronic sensing elements 11
3. Permanent-magnet moving-coil sensing elements 17
4. Electrodynamic sensing elements 22
5. Electromechanical transducer 24
6. Electromagnetic sensing elements 32
7. Induction sensing elements 32

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8. Thermocouples 55
9. Tuning-fork sensing elements 58
10. Ionization sensing elements 41

Ch. II. Sensing Elements for Measuring Nonelectrical Quantities 46
1. Elastic sensing elements 57
2. Pressure sensing elements 60
3. Piezoelectric sensing elements 61
4. Magnetostrictive sensing elements 62
5. Capacitance sensing elements 63
6. Thermistors 64
7. Ionization pressure sensing elements 65
8. Thermostatic sensing elements 65
9. Absorption sensing elements 67
10. Floating and bell-type sensing elements 67
11. Throttling sensing elements 71
12. Hydrodynamic sensing elements for measuring rate of flow 76
13. Anemometer sensing elements 78
14. Electromagnetic sensing elements 82
15. Ultrasonic sensing elements 83
16. Calorimetric sensing elements 83
17. Centrifugal sensing elements 84
18. Thermometers 88
19. Pressure thermometers 89
20. Bimetallic and dilatometric sensing elements 91
21. Resistance thermometers 92
22. Thermocouples 95
23. Thermodielectric sensing elements 98
24. Radiation sensing elements 98
25. Electrolytic sensing elements 102
26. pH - measuring elements 104
27. Gas analyzers 105
28. Psychometric sensing elements 108
29. Hygroscopic sensing elements 109

Ch. III. Gyroscopic Sensing Elements and Accelerometers 111
1. General information on gyro sensing elements 111
2. Gyro verticals 117
3. Course-indicating gyro systems 131
4. Accelerometers 143

Ch. IV. Transducers 157
1. Contact transducers 157
2. Potentiometers 158
3. Displacement transducers 173
4. Electrolytic transducers 175
5. Calometric transducers 175
6. Photoelectric transducers 176
7. Capacitance transducers 178
8. Inductance transducers 179
9. General information on selsyns 182
10. Operation of selsyns with longitudinal and transverse components of current in the secondary circuit 189
11. Operation of a selsyn transmitter with a number of parallel-connected receivers 197
12. Classification of static accuracy of selsyns 198
13. Operation of selsyns with synchro control transformers 200
14. Telegons and magnesyns 214

Ch. V. Vacuum-tube and Semiconductor Modulators and Demodulators 216
1. Function and basic characteristics of modulators and demodulators 216
2. Modulators 221
3. Demodulators 245

SECTION II. AMPLIFIERS 258

Ch. VI. Vacuum-tube, Transistor and Thyratron Amplifiers 258
1. Vacuum-tube d-c amplifiers 258
2. A-c Voltage amplifiers 293
3. A-c power amplifiers 298
4. Transistor amplifiers 300
5. Thyratron amplifiers 323

Ch. VII. Magnetic Amplifiers 326
1. Single-cycle magnetic amplifiers 327

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

2. Push-pull (reversible) magnetic amplifiers 337
3. Voltage amplifiers (magnetic modulators) 348
4. Multistage and polyphase amplifiers 350
5. Contactless magnetic relays 254
6. General information on the design of magnetic amplifiers 256
7. Determination of design parameters of magnetic amplifiers 264
8. Inertness of magnetic amplifiers and methods of decreasing it 369

Ch. VIII. Dynamoelectric Amplifiers 375
1. Separately-excited dynamoelectric amplifiers 376
2. Self-excited dynamoelectric amplifiers 385
3. Amplidynes 394

Ch. IX. Hydraulic and Pneumatic Amplifiers 413
1. Throttling hydraulic amplifiers 413
2. Jet-type hydraulic amplifiers 446
3. Throttling pneumatic amplifiers 462
4. Jet-type pneumatic amplifiers 470

SECTION III. CONTROL ELEMENTS 484

Ch. X. Control Elements Using D-C Motors 484
1. General information 484
2. D-c motor 500
3. Operation of a generator with a control motor as a load 508
4. Operation of an amplidyne with a control motor as a load 510
5. Controlling the operation of a self-excited d-c motor by varying the field 513

Ch. XI. Control Elements Using Two-phase Induction Motors 531
1. Operation of a two-phase induction motor 534
2. System of equations describing physical processes in a two-phase induction motor 540
3. Torque of a two-phase induction motor 544
4. Static characteristics of a two-phase induction motor and their use in determining parameters K_d, K_m, fd 548
5. Effect of parameters of external circuits on static characteristics of a two-phase induction motor 553
6. Transfer function of a two-phase induction motor 557
7. Attenuation-frequency and phase-frequency characteristics of a two-phase induction motor 563
8. Passing an a-c amplitude-modulated signal through an element having a transfer function G(p) 567
9. Transfer function of an open-loop system using a two-phase induction motor for any G(p) 570

Ch. XII. Electric Control Elements Using Electromagnetic Clutches 573
1. Dry-friction electromagnetic clutches 574
2. Viscous-friction electromagnetic clutches 584
3. Electromagnetic slip clutches 595
4. Principle of operation and construction of a quick-response reversible electromagnetic clutch 597

Ch. XIII. Hydraulic and Pneumatic Control Elements (Servomotors) 630
1. Hydraulic control elements 630
2. Hydraulic elements with volume control 654
3. Pneumatic control elements 673

Ch. XIV. Servomechanisms and the Evaluation of Their Characteristics 679
1. Basic indices for evaluating servomechanism characteristics 679
2. Speed of a servomechanism 684
3. Accuracy of a servomechanism 686
4. Additional indices for evaluating servomechanism characteristics 686

Bibliography 698

Index 720

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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SOV/105-59-2-17/25

8(2)

AUTHORS: Pantyushin, S. V., Engineer, Sokolov, A. A., Candidate of Technical Sciences

TITLE: Theory and Design of a Cascode (Teoriya i raschet kaskoda)

PERIODICAL: Elektrichestvo, 1959, Nr 2, pp 70-74 (USSR)

ABSTRACT: Cascode is the designation of an electronic amplification stage in which the anode circuits of two triodes and the load resistance are connected in series (Refs 1, 2). The signal is given to the grid of the lower valve whilst the potential of the grid of the upper valve remains unchanged to earth. The cascode is characterized by the absence of additional circuit elements between the valves, by the reduced requirements on the valve collection, and by a low background. The calculation of an n-valve-cascode and its main operations are given. It can be seen from the formulae (2) to (6) that at a large amplification factor and at a considerable internal resistance, the transconductance of the cascode does not differ from that of the valves representing the cascode. Diagrams show that at a change of the anode load factor from 0.1 to 10 the input capacity of the cascode increases very slowly whilst the amplification factor increases very quickly. For a stable cascode

Card 1/3

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operation it is necessary to fix the grid potential of the upper valve. In the d.c. circuit this is achieved by using a voltage divider at the anode. In the a.c. circuit this can be avoided by the insertion of a large resistance between grid and upper valve cathode and earthing the valve grid over a large capacitance C. Formula (12) is given for the amplification factor of the cascode; it is proportional to the voltage drop at applying load on the anode. A d.c. cascode is investigated. When using the cascode as d.c. amplification stage the anode current component must be regarded which is related to the presence of the feeding anode voltage. The equations (13) for the cascode plate current, (14) for the cascode amplification factor and (15) for the lower valve amplification factor are given. From (13) follows that the thermal background of the cathodes is large. It increases so far that it becomes larger than the information signals and therefore an especially high stabilzation of the heater voltage of the lower cascode valve is required. A means for this is applying the triode-compensation of the temperature drift of the lower valve cathode (Ref 5). As an example for the application of

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Theory and Design of a Cascode

a cascode a compensation-amplification stage for direct current is described which is used in the vertical d.c. amplifier of the oscilloscope. There are 9 figures and 7 references , 1 of which is Soviet.

SUBMITTED: June 24, 1958

Card 3/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A.; PANKRASHKIN, A.A.

Parallel balanced d.c. repeater. Nauch. dokl. vys. shkoly; radiotekh. i elektron. no.2:292-297 '59. (MIRA 14:5)

1. Kafedra poluprovodnikovykh priborov Moskovskogo energeticheskogo instituta.

(Amplifiers (Electronics))

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SOV/105-59-8-14/28

8(3)

AUTHORS: Kurkin, Yu. L., Engineer, Sokolov, A. A., Candidate of Technical Sciences (Moscow)

TITLE: Calculation of the Circuit-diagram of a Compound Transistor

PERIODICAL: Elektrichestvo, 1959, Nr 8, pp 62-64 (USSR)

ABSTRACT: In this article the calculation of the hybrid parameters of a compound common-base transistor is presented. The circuit-diagram of such a transistor with two triodes is shown by figure 1. The formulas (19) to (28) required for calculation are derived. The hybrid parameters of the compound common-emitter transistor are determined from formulas (29) to (32). The calculation of the temperature stabilization is then presented for the circuit-diagram, shown by figure 2, of a compound transistor with two triodes and a common emitter. Formula (38) specifying the temperature stabilization coefficient S is derived. It shows that a good temperature stabilization of a compound transistor and a high input resistance of this circuit are contradictory requirements. Hence the assertion of the compound transistor having a high temperature stability made in reference 2 is incorrect. If such a stability is really to be at-

Card 1/2

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SOV/105-59-8-14/28

Calculation of the Circuit-diagram of a Compound Transistor

tained, a compensation by means of a non-linear temperature-sensitive element must be provided. It is shown that the instability of a compound transistor is smaller by 10 to 25 times than that of the triodes contained in it. The variation of the instability of a compound transistor is very small and amounts to approximately tenths of one per cent. This secures constant impedance conversion in a circuit with negative impedance converters. There are 3 figures and 2 references.

SUBMITTED: May 12, 1959

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

KURKIN, Yu.L.; SOKOLOV, A.A.

Accuracy of transistor negative-impedance converters. Elektrosviaz' 14 no.9:26-35 S '60. (MIRA 13:9)
(Electric current converters) (Transistors)

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25454
S/144/61/000/006/002/004
D207/D306

9,2560

AUTHORS: Kurkin Yu. L., Engineer, and Sokolov, A. A., Candidate of Technical Sciences, Docent

TITLE: Bridge circuits for impedance sign inverters in semiconductor devices

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 6, 1961, 19-26

TEXT: The development of impedance sign inverters (PZ) is one of the leading branches of the modern theory of active circuits. The properties of elementary active circuits are considered, PZ being a particular case of these. Four new types of bridge PZ are given, the elements of their A-matrices are computed, their sensitivity to changes of parameters of transistors is estimated. The analysis shows that the accuracy of these new circuits is higher than the accuracy of earlier circuits. Possibilities of further improvement consist in replacing one of the semiconductor triodes by a composite triode having $\alpha \longrightarrow 1$. In this way non-linear distortions of the system are reduced. A composite triode with feedback

Card 1/3

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D207/D306

Bridge circuits for...

to base current (Fig. 14b) is preferable to Darlington's triode. Considerable simplification is attained by using triodes with complementary symmetry p-n-p and n-p-n. It is shown that bridge PZ can be easily converted into inverters of negative resistance; some useful applications are mentioned. One of the types of inverters proposed is shown in Fig. 9. There are 14 figures, 2 tables and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: P.V. Indiresan, A negative resistance for D.C. computers, Journal Brit. I.R.E. vol. 19, no. 7, July 1959; S. Darlington, USA, Patent 2,663,806.

ASSOCIATION: Kafedra poluprovodnikovykh priborov Moskovskogo energeticheskogo instituta (Department of Semi-conductor Equipment, Moscow Institute of Energetics) (A. A. Sokolov)

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Card 2/3

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ANDRUSHKO, A.F., prepodavatel'; VORONKOV, E.N., prepodavatel', KUBETSKIY, G.A., prepodavatel', MALYSHEV, G.A., prepodavatel'; SETYUKOV, L.I., prepodavatel'; SOKOLOV, A.A., prepodavatel'; KHIRIN, A.A., prepodavatel'; SHALIMOVA, K.V., prof.; ENYUTIN, V.V., red., LARIONOV, G.Ye., tekhn. red.

[Specialized guide to semiconductors and semiconductor devices] Spetsial'nyi praktikum po poluprovodnikam i poluprovodnikovym priboram. Moskva, Gos. energ. izd-vo, 1962. 303 p. (MIRA 15:2)

(Semiconductors) (Transistors)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

MARKUS, John; ALTAYEV, V.Ya., inzh.[translator]; BAYKOVSKIY, V.Ya., inzh. [translator]; ZAYMOVSKIY, Ye.A., inzh.[translator]; KOROVYAKOV, D.B., inzh.[translator]; MOKEYEV, O.K., inzh.[translator]; YAROSHEVSKIY, Yu.A., inzh.[translator]; IVANOV, V.A., kand. tekhn. nauk, red.; SOKOLOV, A.A., kand. tekhn. nauk, red.; BASKAKOVA, L.B., red.; DZHATIYEVA, F.Kh., tekhn. red.

[Handbook of electronic control circuits]Skhemy elektronnoi avtomatiki. Pod red. i s predisl. V.A.Ivanova i A.A.Sokolova. Moskva, Izd-vo inostr. lit-ry, 1962. 342 p. Translated from the English. (Electronic control) (Electronic circuits) (MIRA 15:12) (Automatic control)

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IONKIN, P.A., prof.; SOKOLOV, A.A., dotsent

An improved method for calculating multiterminal networks using matrices. Elektrichestvo no.12:33-40 D '62. (MIRA 15:12)

1. Moskovskiy energeticheskiy institut.
(ELECTRIC NETWORKS) (MATRICES)

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ACC NR: AR6016162 SOURCE CODE: UR/0058/65/000/011/B008/B008

AUTHORS: Sokolov, A. A.; Lysov, B. A.; Kolesnikova, M. M.

40
B

TITLE: Boundary condition in the presence of radiation friction forces

SOURCE: Ref. zh. Fizika, Abs. 11B75

REF SOURCE: Tr. po teorii polya, vyp. 1, 1964, 3-11

TOPIC TAGS: electron radiation, Cauchy problem, electron motion, boundary value problem, initial value problem

ABSTRACT: The authors investigate the classical equation of motion of an electron, with allowance for the radiation-friction force. It is shown that a solution for specified initial conditions (the Cauchy problem) can be obtained if there is no radiation-friction force. If the latter is taken into account, on the other hand, then one should obtain a boundary-value problem in which the final conditions must be specified besides the initial ones. [Translation of abstract]

SUB CODE: 20, 12

Card 1/1 MS

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[illegible], A. [illegible]; [illegible]; [illegible], [illegible]

Motion of relativistic electrons with oriented spin and a constant homogeneous magnetic field. Izv. vys. ucheb. zav.; fiz. 7 no.6:41-50 '64.

(MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

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[illegible]: [illegible], [illegible]; [illegible], [illegible].

Neutrino scattering by electrons with longitudinal and transverse polarization. Izv. vys. ucheb. zav.; fiz. 7 no.6:51-57 '64. (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

IONKIN, P.A., prof.; SOKOLOV, A.A., dotsent

Principles of the construction and transformation of charts for the design of electrical networks. Elektrichestvo no.5:67-73 My '64. (MIRA 17:6)

1. Moskovskiy energeticheskiy institut.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

VOROB'YEV, Khariton Sergeyevich; MAZUROV, Dmitriy Yakovlevich; SOKOLOV, Aleksey Aleksandrovich. Prinimal uchastiye SEVAST'YANOV, Ye.F.; FUFAYEVA, G.I., red.

[Heat-engineering processes and the equipment of silicate using industries] Teplotekhnologicheskie protsessy i apparaty silikatnykh proizvodstv. Moskva, Vysshaia shkola, 1964. 712 p. (MIRA 18:8)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.A., dotsent

Rule for composing a total conductance matrix of an electron-tube circuit. Elektrichestvo no.2:90 F '65. (MIRA 18:3)

1. Moskovskiy energeticheskiy institut.

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ACC NR: AT6015893 6

is used for accelerations up to 3 Mev. The condenser battery is divided in two sections charged to +5 kv and -5 kv. By means of vacuum commutators, the discharge current is applied to the primary of the pulse transformer. The electrical parameters of the main circuit are: $C_T=11.25\cdot10^{-3}$ F × 10 kv, L=670 cm, $R=3\cdot10^{-4}$ ohm, Q=2.7, with 20% loss of the peak current. The auxiliary circuit used for accelerations up to 3 Mev is given in figure 1. The repetition rate depends essentially on the power

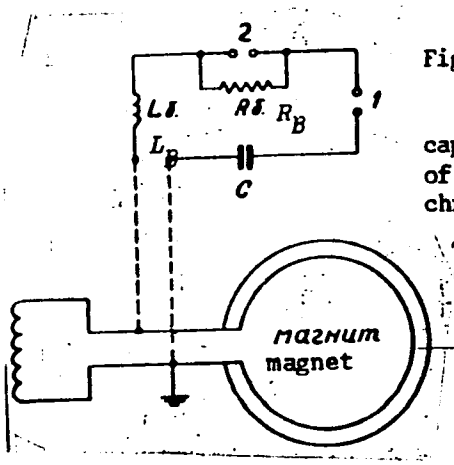

Fig. 1. L_B=20 μh, C=11.50μF × 5 kv, and R_B=0.6Ω.

capacity of the power supply rectifiers. Al∿$0.7\cdot10^6$ A of the magnet current, (corresponding to 130 Mev synchrotron energy) and 2·10 kw the repetition rate B_s ∿ ∿30 per sec. After several thousand pulses with $0.5\text{-}1\cdot10^6$ A, there were no deformations observed in this setup. In conclusion, the authors thank G.I. Budker and A. A. Naumov for their interest and counsel, and also G. S. Morozov, M. Ya. Ragutskiy, G. T. Tsikin and Ye. V. Shun'ko for taking part in

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L 35914-66

ACC NR: AT6015893

the development of individual elements of the power supply system. Orig. art. has: 5 figures, 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 001

Card 3/3

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L 35920-66 EWT(1)/EWT(m) [illegible] (c) [illegible] GD

ACC NR: AT6015892 SOURCE CODE: UR/0000/65/000/000/0001/0016

AUTHOR: Nelidov, A. B.; Samoylov, I. M.; Sokolov, A. A.

ORG: Institute of Nuclear Physics, Siberian Department AN SSSR, Novosibirsk (Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR)

TITLE: Properties of the magnetic field of the BSB coreless synchrotron

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut yadernoy fiziki. Doklady, 1965. Kharakteristiki magnitnogo polya bezzheleznogo sinkhrotona BSB, 1-16

TOPIC TAGS: synchrotron, skin effect, magnetic field measurement, orbit perturbation / BSB synchrotron

ABSTRACT: The results of field measurements in the BSB coreless single turn synchrotron are discussed. Field measurements were made during a run with sinusoidal pulse current having ∿1 msec rise time. The special shape of the guiding magnetic field in the BSB synchrotron is obtained by the use of the skin effect in the doughnut. The walls of the current carrying element are formed in the shape of an ideal field H. The radius of curvature R of the walls has such a form that $n \sim 0.4$, where $n=r/R$ (r=radius of the orbit). The value of n is a function of the ratio $h/\Delta r$, where h represents the height of the guide; it is also a function of the skin depth. Additional variations of the equilibrium region (for $(0<n<1)$) are due to the geometry of the ring,

Card 1/3

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L 35920-66

ACC NR: AT6015892

such as feed-in location, beam entrance and beam extraction aperture. The field measurements show the extension of the variation of n around $n \sim 0.4$ in the working region of the ring as a function of the duty cycle with $H(t)$. The degree of orbit perturbation due to field deviations from the azimuthal symmetry was obtained. A series of measurements were made of field deviations due to the presence of metallic plates of different forms and thickness. It was found that the most important field perturbations are due to the nonsymmetrical disposition of the feeders of the inner ring. Such a feed line has a small inductance and is mechanically safe. First, measurements of the magnetic field were made on a scale model (1:1.84) with 4 and 1 kc nonpulsed currents. The choice of h=30 cm and Δr=10 cm was based upon these measurements. Such a configuration gave t=10 cm with $n \sim 0.4$. Later, the measurements were made with pulsed currents. The essential measurements were made at three different times of the sinusoidal current. The first interval t_{m_1}=360 μsec. The second at $t''=t_{m_1} + \delta t$, or 400 + 500 μsec, and t_{m_3}=950 μsec. It was found that at the time of injection, n was about two third hrs. This is an important result, since the field H can change the angle α during the injection. Finally, the field perturbations due to openings and cuts in the ring were found to be small, even for t_m=950 μsec. It was found that the aforementioned configuration of the ring yielded a good region of stability (about 0.4 h) in the ring, that n was near the calculated value, and that the field deviations were small. The measured field deviations correspond to small orbit perturba-

Card 2/3

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L 35920-66
ACC NR: AT6015892

2

tions (around 3-5 mm). The authors thank G. I. Budker and A. A. Naumov for their advice and for their interest in the work. Orig. art. has: 5 figures, 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004

Card 3/3

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L 63650-65

ACCESSION NR: AP5017809

UR/0286/65/000/011/0041/0041
621.375.024

AUTHOR: Sokolov, A. A.

TITLE: D-c amplifier. Class 21, No. 171439

SOURCE: Byulleten' izobreteniy i tovarnykh zhakov, no. 11, 1965, 41

TOPIC TAGS: d c amplifier

ABSTRACT: This Author Certificate introduces a d-c amplifier with a series-balanced stage which forms a bridge made up of two series connected triodes and two similarly connected resistors with the power supply connected in one diagonal and the load resistor in the other. The gain and null stability are improved by feedback voltage which goes to the grid of a compensating tube from the tap of a potentiometer which is connected to two resistors in the arms of the bridge. A modification of this amplifier uses two triodes as fixed resistors for the bridge. Positive feedback is fed to the grid of one of the triodes as in the first device while the bias on the grid of the second triode is taken from a potentiometer which is connected in parallel with the load resistance. [14]

Card 1/2

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L 63650-65

ACCESSION NR: AP5017809

ASSOCIATION: none

SUBMITTED: 30Oct63

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4055

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

L 4005-66 EWT(d)/EWT(1)/EPF(c)/EPF(n)-2/ETC(m) WW UR/0286/65/000/015/0125/0126 69

ACCESSION NR: AP5024422

AUTHORS: Zozulya, N. V.; Minyaylenko, N. A.; Sokolov, A. A.; Chavdarov, A. S. B

TITLE: Ribbed surface for tubular and plate heat exchangers. Class 46, No. 173546

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 125-126

TOPIC TAGS: heat exchanger, heat diffusion, heat exchange panel

ABSTRACT: This Author Certificate presents a ribbed surface for tubular and plate heat exchangers containing parallel rows of tubes or plates (see Fig. 1 on the Enclosure). To decrease the area of its frontal section and to increase its coefficient of heat exchange, the ribs on the adjacent rows of tubes or plates are axially shifted in respect to one another, while the rows of tubes or plates are separated by deflectors. The tubes or plates and the deflectors form defusers, convectors, and gas ducts. The ribs may be longitudinal (smooth or corrugated), or they may be made of wires of desired diameters. The tubes may be flattened. Orig. art. has: 1 figure.

ASSOCIATION: Institut teploenergetiki, AN UkrSSR (Institute of Heat Power Engineering, AN UkrSSR)

UDC: 621.565.94

Card 1/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

L 4005-66
ACCESSION NR: AP5024422

SUBMITTED: 13Sep63 ENCL: 01 SUB CODE: IE, TD

NO REF SOV: 000 OTHER: 000

Card 2/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

L 4005-66

ACCESSION NR: AP5024422

ENCLOSURE: 01

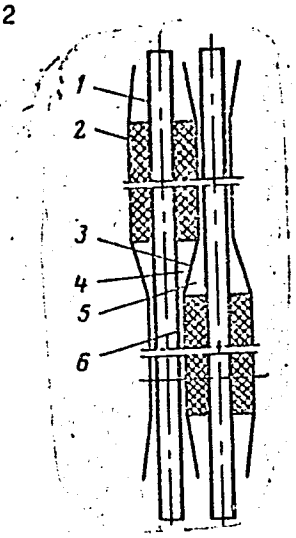

Fig. 1. 1- tube; 2- ribbed portion; 3- deflector; 4- diffuser; 5- convector; 6- gas duct

Card 3/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

L 22527-66 EWT(1) IJP(c) AT

ACC NR: AP6009421 SOURCE CODE: UR/0020/66/166/006/1332/1334

AUTHORS: Sokolov, A. A.; Ternov, I. M.

46
B

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Contribution to the theory of induced transitions in the emission from a radiating electron

21

SOURCE: AN SSSR. Doklady, v. 166, no. 6, 1966, 1332-1334

TOPIC TAGS: electron radiation, electron interaction, electromagnetic wave phenomenon, wave function, electron transition, relativistic electron

ABSTRACT: The authors consider the radiation of an electron moving in a constant and homogeneous magnetic field, induced by an incident external electromagnetic wave. The damping brought about by the finite time that the electron stays at the initial level is taken into account. Use is made of the electron wave functions calculated by the authors earlier (ZhETF v. 25, 698, 1953). The case when the incident

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electromagnetic wave is linearly polarized is also considered. An expression is derived for the energy absorbed per unit time by an electron during resonant transitions, in terms of the electric field intensity in the incident wave. The formula obtained is applicable for any number of harmonics of all order and has no limitation connected with the velocity of the electron. In the case of a nonrelativistic electron the expression agrees with that obtained by J. Schneider (Phys. Rev. Letters, no. 2, 504, 1959). This report was presented by Academician N. N. Bogolyubov. Orig. art. has: 20 formulas.

SUB CODE: 20/ SUBM DATE: 25Jun65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 BLG

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

The problem of the anharmonic vibrator in wave mechanics. A. A. Sokolov. *J. Exptl. Theoret. Phys.* (U.S.S.R.) 2, 151-61(1932).—Theoretical. The results agree with those of Born and Jordan obtained by matrix methods. F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

A 51

4355. Second Quantisation of Dirac's Equation. D. Iwanenko and A. Sokolow. *Phys. Zeits. d. Sowjetunion*, 11, 6, *pp.* 590–596, 1937. *In German.*—Summary of the formulæ of the many electron problem in Dirac's theory. The difficulties of the theory are compared with those which would occur in a theory in which the electron had a spin but would satisfy Bose-Einstein statistics. R. P.

ASM S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

A 53

5322. Neutrino Theory of Light. A. Sokolow. *Phys. Zeits. d. Sowjetunion*, 12. 2. pp. 148–153, 1937. *In German.*—A clear and physically simple discussion of the one-dimensional case of the neutrino theory of light is given. Recent objections by Fock [see Abstract 2591 (1937)] to the theory are shown to be incorrect. The electromagnetic reciprocal effect is dealt with as a consequence of the neutrino process. It is seen that this can be done without the explicit introduction of the photon field. G. O. B.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

SA

A 53
Ab

627. Radiation Emitted from Electron-Positron Pairs on Interaction with a Charge. A. Sokolow. *Phys. Zeits. d. Sowjetunion*, 12. 4. *pp.* 472–481, 1937. *In German.*—Mathematical. An expression for the interaction of a charge with the field of an electron-positron pair is deduced. The probability of emission of radiation is calculated. The expression leads to the view that showers might be produced if the energy were great enough.

A. J. M.

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CA

3

The possibility of a neutrino theory of light. II. The three-dimensional case. A. Sokolov. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 8, 113-21(1938); cf. *Ibid.* 8, 1055-67 (1937).—The possibility of a neutrino theory of light in 3 dimensions was investigated and the conception of a specific "neutrino charge" necessary thereto introduced. Through *Chem. Zentr.* 1939, II, 1232. M. G. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

2415. Three-Dimensional Case in the Neutrino Theory of Light. Part II. A. Sokolow. *Phys. Zeits. d. Sowjetunion*, 13. 1. *pp.* 36–40, 1938. *In German.*—In a continuation of some earlier work [see Abstract 5222 (1937)] an attempt is made to extend the neutrino theory of light to three dimensions. The analysis leads to the conception of a specific neutrino "charge." G. O. H.

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1st and 2nd orders

Processes and properties index

3rd and 4th orders

S/

453
dd

4472. Theory of Showers. D. Iwanenko and A. Sokolow. *Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.* 19, 9, pp. 681–682, 1938. *In English.*—By using the saddle point method to evaluate an integral, formulæ are obtained for the number of particles and the number of photons in the theory of showers. G. O. B.

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

The nature of the heavy electron. A. Sokolov. *Compt. rend. acad. sci. U. R. S. S.* 21, 34-1938 (in English). Theoretical. Choice of a proper law of interaction between the fields of an electron and a neutrino leads at high energies to their combining to form a mesotron, which will break up again at lower energies. This is in qual. agreement with the expts. of Blackett (*C. A.* 32, 6145[9]). A. O. Allen

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

BC

A-1

Classical mechanics. D. I. Ivanenko and A. Sokolov (*J. Physics U.R.S.S.*, 1940, 3, 57—64).—A general solution of the Proca equations for a meson field is given on classical lines. The scattering and interaction of mesons are discussed. The increase of cross-section for the quasi-magnetic scattering is considered. A. J. M.

State Univ. of Sverdlovsk.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.

"Generalized Wave Equation and Classical Mesodynamics," Dok. AN, 26, No. 1, 1940.

Sverdlovsk State Univ.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

A-1

Quantum theory of emission of elementary particles. A. Sokolov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1940, [illegible], 415—417).—A consistent theory describing the emission of photons for which the energy, $h\omega$, is known to equal the product of impulse, hq, and velocity of light, c (or $\omega = cq$), can be developed on the basis of quantum mechanics. The case where $\omega \leq cq$ is now dealt with.

A. J. M.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

A-1

Scattering of neutrons. A. Ivanov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1949, 69, 19—19).—Mathematical. The scattering of neutral mesons by free nucleons (*i.e.*, heavy particles, protons + neutrons) is discussed. O. D. S.

State Univ. Sverdlovsk.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

SA

A53
dd

2642 539.152.1 : 537.591.15 — 3

Scattering of mesons taking damping into account.

SOKOLOW, A. *J. Phys., U.S.S.R.*, 5, 4, *pp.* 231–237. 1941.—Quantum-mechanical methods are used to calculate the effective cross-section for the scattering of mesons at nucleons, taking damping into account.

A. J. M.

COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

SOKOLOV, A.

"The dipole character of the meson, and the difficulties of meson theory," Phys. Rev., 60, pp. 277-278, August 1, 1941.

So: Science Ab., Vol. 44-A, Jan-Dec., 1941.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651930004-2

A 53
X

The dipole character of the meson and the polarization of vacuum. IWANENKO, D., AND SOKOLOW, A. *J. Phys., U.S.S.R.*, 6, 3/4, *pp.* 175-179, 1942. – Proca equations lead in a general way to the apparition of an effective dipole of a meson. The part played by the latter is illustrated on some nuclear and electromagnetic processes and by some non-linear problems.

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