

- SUKHOPARA, F.N.; BITYAZEVA, V.A.; PROKHOROV, A.I.

Studies by Chernovtsy economic geographers. Izv.AN SSSR.
Ser.geog. no.4:133-135 J1-Ag '60. (MIRA 13:7)
(Stanislav Economic Region--Geography, Economic)

SUKHOPAROV, A.A.

Machining light rubber surfaces by cutting tools. Dum.prom. 27 no.12:
21 D '52. (MLBA 7:10)

1. Glavnyy tekhnolog zavoda im. 2-y Pyatiletki.
(Cutting tools) (Rubber)

SUKHOPAROV, A.A.

Producing high-quality surface smoothness by using graphite-abrasive wheels for finish grinding. Trudy LIEI no.8:178-181 '54.(MIRA 9:9)
(Surfaces (Technology)--Quality control) (Grinding wheels)

~~SECRET~~, A.S.S., Inzhener.

Quality of surfaces subjected to fine turning. Study LIMI no. 12: 1956.

(Turning) (Surfaces (Technology))

(MIRA 10)

SUKHOPAROV, Aleksandr Aleksandrovich; USTINOV, Yuriy Timofeyevich;
KONDRATENKO, N.G., inzh., retsenzent; PARFENT'YEV, G.A., inzh.,
retsenzent; MERKULOV, Ye.F., inzh., red.; VASIL'YEVA, V.P., red.
izd-va; SPERANSKAYA, O.V., tekhn. red.

[Assembling industrial equipment] Montazh promyshlennogo oborudovaniia.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 316 p.
(Machinery--Erecting work) (MIRA 11:7)

25(5)

AUTHORS:

Sukhoparov, A.A. and Pogodin, B.A., Engineers

SOV/117-59-2-11/27

TITLE:

The Preparation of the Production System for the Group Machining of Parts at the "Ekonomayzer" Plant (Podgotovka proizvodstva dlya gruppovoy obrabotki detaley na zavode "Ekonomayzer")

PERIODICAL:

Mashinostroitel', 1959, Nr 2, p 20 (USSR)

ABSTRACT:

The authors tell the experience acquired by the plant in work preparatory to introducing the group machining process, initiated by the plant in 1957 with the help of the Leningrad Branch of the Vsesoyuznyy proyekto-tekhnologicheskiy institut tyazhlogo mashinostroyeniya (All Union Technological-Planning Institute of Heavy Machine Building). The first experience was acquired on turret lathes, for which purpose about 2,000 work items were selected. The head of the turret lathe was regulated for the machining of a given complex typical item. The lathe could then perform the machining of all items, which were members of the same technological group. The

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SOV/117-59-2-11/27

The Preparation of the Production System for the Group Machining of Parts at the "Kornmayer" Plant

work norm was reckoned on the basis of the work time required for the machining of one given item. The work norms for other items were found by the method of interpolation. The article also deals with changes in documentation and other paper work, necessary to the introduction of the group machining process, and with the respective changing of planning, from planning by final products to planning by separate items. There is 1 set of diagrams.

Card 2/2

SUKHOPAROV, A. A , inzh.

Preparing production processes for multiple machining of parts at
the "Ekonomzaizer" Plant. Trudy LIEI no.30:137-163 '60.

(MIRA 13:10)

(Leningrad--Machinery industry)

SUKHOPAROV, Oleg Nikolayevich; VERZHBINSKAYA, I.I., inzh., red.; FREGER,
D.P., red. izd-va; GVIRTS, V.L., tekhn. red.

[Improving technological processes for manufacturing flat and many-
sided punches and mandrels] Usovershenstvovanie tekhnologicheskogo
protssesa izgotovleniia ploskikh i mnogogrannykh puansonov i opravok.
Leningrad, 1961. 10 p. (Leningradskii Dom nauchno-tekhnicheskoi pro-
pagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaiia obrabotka
metallov, no.6) (MIRA 14:7)

(Grinding machines--Attachments)

ACC NR: AP7001955

(A)

SOURCE CODE: UR/0120/66/000/006/0161/0164

AUTHOR: Itskevich, Ye. S.; Voronovskiy, A. N.; Gavrilov, A. F.; ~~Sukhoparov, V. A.~~

ORG: Institute of Physics of High Pressures AN SSSR, Moscow (Institut fiziki vysokikh davleniy AN SSSR)

TITLE: High pressure (up to 18 Kbar) chamber for operation at liquid helium temperatures

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 161-164

TOPIC TAGS: high pressure chamber, metal, single crystal, liquid helium, temperature, beryllium bronze, corundum microlite

ABSTRACT: Two models of a high-pressure (up to 18 kbar) chamber used for studying single crystals of metals and semiconductors in a magnetic field at liquid helium temperatures are described. The chambers (6.5 mm inside diameter) are made of heat-treated beryllium-bronze and the pistons are made of TSM-322 corundum-microlite heat treated to a hardness of 75-78Rc. The required pressure is created in the chamber at room temperature by a hydraulic press. The chamber is then sealed mechanically and placed in a Dewar vessel containing liquid helium. Pressure is measured by means of manganin and superconducting pressure gages. The magnitudes of anisotropy

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UDC: 539.89

ACC NR: AP7001955

of magnetic resistance and of quantum oscillations of electric resistance of zinc, measured in the chamber, showed that the compression was close to hydrostatic. The heat expansion of the materials used for chamber construction were tested at temperatures from 77K to 20C. It was found that the heat expansion coefficient of corundum-microlite is significantly smaller than that of beryllium-bronze. Thus, using a second material in the chamber should not lead to pressure losses when the temperature drops. Orig. art. has: 4 figures and 1 table.

SUB CODE: ¹³ 20/ SUBM DATE: 11Dec65/ ORIG REF: 003/ OTH REF: 003/
ATD PRESS: 5112

Card 2/2

ITSKEVICH, Ye.S.; IL'INA, M.A.; SUKHOPAROV, V.A.

Effect of pressure on the transition temperature to the super-
conductive state in Nb₃Sn and Nb - Zr alloys. Zhur. eksp. i teor.
fiz. 45 no.5:1378-1379 N '63. (MIRA 17:1)

1. Institut fiziki vysokikh davleniy AN SSSR.

L 4083-66

ACCESSION NR: AP5021728

UR/0386/65/002/002/0067/0071

AUTHOR: Itskevich, Ye. S.; Voronovskiy, A. N.; Sukhoparov, V. A.

26
24
B

TITLE: Variation of low-frequency component of the electric-resistance oscillations of zinc in a magnetic field at a pressure of 16,000 kg/cm²

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 2, 1965, 67-71

TOPIC TAGS: zinc, electric resistance, high pressure research, pressure effect, transverse magnetic field, magnetoresistance, quantum oscillation

ABSTRACT: The strong influence of pressure on the frequency of the lowest-frequency quantum oscillations of the electric resistance of zinc in a transverse magnetic field, investigated earlier by one of the authors (Itskevich, with Yu. P. Gaydukov, ZhETF v. 45, 71, 1963), was studied further with the aid of a new bomb, capable of producing pressures up to 18,000 kg/cm² at helium temperatures. The new bomb is illustrated in Fig. 1 of the Enclosure. Its main advantages are that its container is self-sealing and that its moving parts are made of solid non-magnetic materials. Measurements were made without pressure and at 11,100 and 15,900 kg/cm² in fields ranging from 2000 to 11,000 oe. The results show conclu-

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ACCESSION NR: AP5021728

sively that the oscillations of the electric resistance of zinc decrease abruptly with increasing pressure, and are in good agreement with theoretical calculations based on the model of W. A. Harrison (Phys. Rev. v. 118, 1190, 1960). The results also confirm the existence of a needle-like electronic part of the Fermi surface of cadmium, which should become observable at the higher pressures attained in the present experiment. "The authors thank Professor L. F. Vereshchagin for continuous interest in the work." Orig. art. has: 3 figures, 1 formula, and 1 table. [02]

ASSOCIATION: Institut fiziki vysokikh davleniy Akademii nauk SSSR (Institute of High-Pressure Physics, Academy of Sciences, SSSR)

SUBMITTED: 25 May 65

ENCL: 01

SUB CODE: EM, MM

NO REF SOV: 003

OTHER: 006

ATD PRESS: 4/27

Card 2/3

L 4083-66

ACCESSION NR: AP5021728

ENCLOSURE: 01

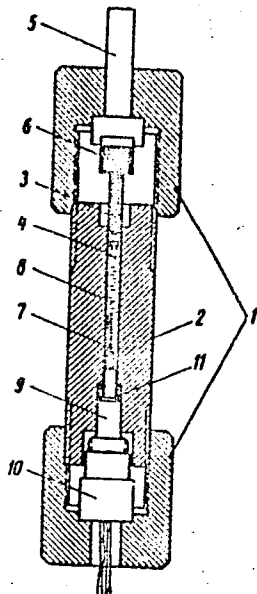


Fig. 1. Diagram of bomb

- 1 - Locking nuts;
- 2 - bomb container;
- 3 - microlite piston;
- 4 - anvil and gasket;
- 5 - ram;
- 6 - bearing;
- 7 - sample;
- 8 - pressure transmitting medium;
- 9 - seal;
- 10 - seal bearing cylinder;
- 11 - gasket.

Card 3/3 BVK

L 14962-66 EPF(n)-2/EWP(k)/EWT(1)/EWT(m)/EWP(b)/EWA(d)/JWF(t) IJF(s) GG/
ACC NR: AP6002467 AT/WW/JD SOURCE CODE: UR/0386/65/002/011/0514/0519

AUTHOR: Itskevich, Ye. S.; Muzhdaba, V. M.; Sukhoparov, V. A.; Shalyt, S. S. 78
B

ORG: Institute of High Pressure Physics, Academy of Sciences SSSR; Institute of Semiconductors, Academy of Sciences SSSR

TITLE: Influence of hydrostatic pressure on the effective mass of electrons in InSb 117

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 11, 1965, 514-519

TOPIC TAGS: indium compound, antimonide, magnetoresistance, electron, pressure effect, magnetic field intensity

ABSTRACT: Data are given from an experimental study of the direct effect which hydrostatic pressure of up to 8000 kg/cm² has on the effective mass of electrons. The experimental method was based on the new Gurevich-Firsov magnetophonon resonance phenomenon. The specimen studied was a single crystal of n-type InSb with dimensions of 2 x 2,5 x 16 mm, a concentration of 8·10¹³ cm⁻³ and a mobility of 7·10⁵ cm²/v-sec at 77°K. The relative reduction in the linear dimensions of the crystal was no greater than 0.6% at maximum pressure. Curves are given showing the trans-
21,44,55

Card 1/2

2

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ACC NR: AP6002467

verse magnetoresistance as a function of magnetic field strength at various pressures. Formulas are given for determining the effective mass of electrons from the period of the oscillations and from the position of the individual maxima on these curves. Calculations show a change in effective mass from 0.016 to 0.025 when the pressure is changed from 1 kg/cm² to 8000 kg/cm². Since the width of the forbidden zone in this pressure interval increases by a factor of 1.5, the experimental data confirms the theoretical conclusion of direct proportionality between the effective mass of electrons and the width of the forbidden zone for an InSb crystal in this pressure interval. Orig. art. has: 3 figures, 3 tables.

SUB CODE: 20/ . SUBM DATE: 20Oct65/ ORIG REF: 002/ OTH REF: 004

Card 2/2 *Jo*

USSR/Human and Animal Morphology (Normal and Pathological). Nervous System. Peripheral Nervous System.

S-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 74316

Author : ~~Sukhoparova, P.~~
Inst : Stalinabad Medical Institute.
Title : Nerves of the Palmar Surface of the Wrist and Their Relationship to Vagina Fibrosa Tendinis.

Orig Pub: Tr. Stalinabadsk. med. in-ta, 1955, 14, 107-110

Abstract: By the usual method of preparation, 20 human wrists were studied. In 95%, a connective branch between the median and ulnar nerves was discovered, which had varying thickness

Card : 1/2

SUKHOPAROVA, A.P.

Indications for the treatment of surgical patients at the
Khodzha-Obi-Garm health resort. Zdrav.Tadzh. 6 no.3:30-33
My-Je '59. (MIRA 12:11)

1. Iz kafedry obshchey khirurgii (zav. - dotsent K.T.Tadzhiyev)
Stalinabadskogo medinstituta im. Abuali ibni Sinc.
(KHODZHA-OBIGARM--THERAPEUTICS, PHYSIOLOGICAL)
(MUSCULOSKELETAL SYSTEM--DISEASES)

VEVIOROVSKIY, I.V.; SUKHOPOL'SKIY, A.F.; CHUROV, A.I.; YERMAKOV,
K.A., red.

[Diesel locomotive operation, maintenance and repair; a
methodological textbook] Teplovoznoe khoziaistvo; uchebno-
metodicheskoe posobie. Leningrad, In-t inzhenerov zheldor.
transporta, 1964. 64 p. (MIRA 17:11)

...SUKHOPOL'SKIY, V. N.

"Overhead conveyers" by V.K. D'iachkov. Reviewed by
V. Sukhopol'skii. Mashinostroitel' no.1:46 Ja. '62. (MIRA 15:1)
(Conveying machinery)
(D'iachkov, V.K.)

SUKHOPOL'SKIY, V.N.

New methods for metal-chip removal and coolant cleaning. Avt.prom.
29 no.9:1-4 S '63. (MIRA 16:9)

1. Moskovskiy avtozavod imeni Likhacheva.
(Metal cutting)

SUKHOPOL'SKIY, V.N., inzh.

Using overhead pushing conveyors with an automatic addressing
device at the Likhachev Automobile Plant. Vest. mashinostr. 43
no.6:44-45 Je '63. (MIRA 16:7)

(Conveying machinery)

SUKHOPOL'SKIY, V.N.

Universal vibratory conveyor for conveying metal chips. Avt.
prom. 30 no.11:34-36 N '64 (MIRA 18:2)

1. Moskovskiy avtozavod imeni Likhacheva.

KARTASHEV, V.I., inzh.; SUKHOPRUDSKIY, N.D.

Vacuum preservation of traction motor armatures. Trudy TSNII MPS
no.42:5-12 '51. (MIRA 11:6)

(Electric railway motors) (Armatures)

SUKHOPRUDSKIY, N. D. and KARTAGHEV, V. I.

"The Impregnation of the Armatures of Traction Motors under Vacuum,"
The Works of the Scientific-Research Institute of Railroad Transportation (Trudy
vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta),
No 42, Transzheldorizdat, 132 pp, 1951.

W-22517, 29 Apr 52

SUKHOPUDSKIY, N.D.

KARTASHEV, V.I.; SUKHOPUDSKIY, N.D.; SHIRYAYEV, A.P., inzhener; STIKHNO,
T.V., tekhnicheskiy redaktor.

[Insulating and testing d.c. traction engines for rolling stock]
Izoliatsiia mashin elektropodvizhnogo sostava postoiannogo toka
i ee ispytania. Moskva, Gos.transp.zhel-dor.izd-vo 1956. 106 p.
(Moscow, Vsesoiuznyi nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy, no.128) (MLRA 10:1)
(Electric locomotives) (Insulating materials)

8(0)

SOV/112-58-3-3931

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 61 (USSR)

AUTHOR: Sukhoprudskiy, N. D.

TITLE: Fault Localization in Traction-Motor Armature Windings by the Type IU-2 Pulse Outfit (Opredeleniye povrezhdeniy obmotok yakorey tyagovykh elektrodvigatelye impul'snoy ustanovkoy tipa IU-2)

PERIODICAL: Vestn. Vses. n.-i. in-ta zh. d. transp., 1957, Nr 2, pp 32-34

ABSTRACT: Built by the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All-Union Scientific-Research Railroad Transportation Institute), the type IU-2 pulse outfit, which is intended for fault localization in wave-wound or lap-wound armatures without equalizers, consists of a pulse generator and an oscilloscope. The pulse-generator voltage amplitude can be continuously adjusted from 0 to 5 kv, developing the turn-to-turn armature winding voltage of about 500-600 v. The outfit has been successfully used at repair plants of the Ministry of Transportation for locating

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SOV/112-58-3-3931

Fault Localization in Traction-Motor Armature Windings by the Type IU-2
turn-to-turn shorts, winding ground faults, and winding breaks. The author
presents the curves that are observed on the oscilloscope screen in the above
cases.

V.S.K.

Card 2/2

SUKHOPOLSKII, N.D., kandidat tekhnicheskikh nauk.

Testing insulators without dismantling. Elek.i teploizmen.

no.7:21-22 JI '57.

(MIRA 1957)

(Electric railroads--Testing)

SUKHOPRUDSKIY, N.D.; OVLYASYUK, V.Ya.

Contactless system of remote control for traction substations.
Elek. 1 tepl. tiaga 2 no.11:26-28 N '58. (MIRA 11:12)
(Electric railroads--Substations) (Remote control)

OVLASYUK, V.Ya., inzh.; SUKHOPRUDSKIY, N.D., kand. tekhn. nauk

Remote control of break-switches on the contact line of a.c.
electric railroads. Vest. TSNII MPS 18 no.7:9-13 N '59.
(MIRA 13:2)

(Remote control)
(Electric railroads--Substations)

OVLASYUK, V.Ya., inzh.; SUKHOPRUDSKIY, N.D., kand.tekhn.nauk;
PETUSHKOVA, I.K., inzh.; P'd.; BOBROVA, Ye.N., tekhn.red.

[Noncontact remote control devices of electrified railroads]
Beskontaknye ustroistva teleupravleniia elektrifitsirovannykh
zheleznnykh dorog. Moskva, Izdatel'sko-poligr.ob"edinenie
M-va putei soob., 1960. 241 p. (Moscow. Vsesoiuznyi nauchno-
issledovatel'skiy institut zheleznodorozhnogo **transporta**).
Trudy, no. 205) (MIRA 14:2)
(Electric railroads—Electric equipment)
(Remote control)

S/194/61/000/010/C47/082
D256/D301

9.6000

AUTHORS: Ovlasyuk, V.Ya. and Sukhoprudskiy, N.D.

TITLE: A fast remote-control electronic system using semi-conducting and magnetic elements

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 50, abstract 10 V418 (V sb. Nibernetika i avtomatiz. transp. protsessov, M., Transzhel-ezdorizdat, 1960, 197-252)

TEXT: The TV-TC (TU-TS)-type arrangement employs the principle of distribution with a time-pulse criterion. The master part of the arrangement is fully transistorized, the remote-indicating networks include magnetic elements with rectangular hysteresis characteristics and cold cathode thyratrons, the remote-control output system using cells of transistorized magnetic circuits. The max. capacity of the arrangement provides for control of 15 operating points with a number of control objects up to 60, and signalization-

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B

Card 1/2

SUKHOPRUDSKIY, N.; OVLASYUK, V., starshiy nauchnyy sotrudnik

Noncontact remote control. NTO 3 no.4:56-58 Ap '61. (MIRA 14:3)

1. Rukovoditel' laboratorii Vsesoyuznogo nauchno-issledovatel'skogo
instituta zheleznodorozhnogo transporta (for Sukhoprudskiy).
(Electric railroads--Signaling)

32237

9.8200 (2305)
6.7800 (1089)

S/196/61/000/011/04C/042
E194/E155

AUTHORS: Ovlasyuk, V. Ya., and Sukhoprudskiy, N.D.

TITLE: A contactless device for telecontrol with time separation of channels, type ETP-59 (BTR-59) for controlling isolators of a contact system

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.11, 1961, 6-7, abstract 11L 33. (Tr. Vses. n.-i. in-ta zh.-d. transp. no.209, 1961, 19-45)

TEXT: Equipment type BTR-59 provides for 10 control points. The maximum number of telesignals is 10-12. The equipment is made on the distribution principle, with time-separation of telecontrol and telesignalling channels. Two frequency channels are provided for telecontrol and telesignalling. The telecontrol transmitting set is common to all points. It is used to send out to the points routine automatic commands for telesignalling. Each command for telesignalling consists of a series of cadence impulses. The despatcher point apparatus is rack-mounted. The transmitter equipment at the control points is in the form of wall cabinets which include the telecontrol-
Card 1/2

X

S/194/62/000/002/019/096
D230/D301

AUTHORS: Ovlasyuk, V. Ya. and Sukhoprudskiy, N. D.

TITLE: Nanosecond counter

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
no. 2, 1962, abstract 2-2-55y (Tr. Vses. n-i. in-ta
zh-d transp., 1961, no. 209, 93-97)

TEXT: In the preventive investigation of insulators for contact
mains of the electrified railways the method of the capacitor dis-
charge is used. The accuracy of determining the distance to the
damaged insulator lies between 100 - 500 m. In order to improve the
accuracy a new device with digital indication is proposed. The de-
vice consists of a standard-signal quartz generator at 10 Mc/c, ✓
amplifier-modulator, start/finish circuit, a double counter and a
bank of controlling invertors. The double counter is triggered by
the front edge of the measured pulse and is completed by the back
edge; thus, the number of the pulses counted is proportional to the

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SUKHOPRUDSKIY, N.D.

8(3)

PHASE I BOOK EXPLOITATION

SOV/1450

Radchenko, V.D., Candidate of Technical Sciences, B.N. Rebrik, Candidate of Technical Sciences, S.D. Sokolov, Candidate of Technical Sciences, N.D. Sukhoprudskiy, Candidate of Technical Sciences

Povysheniye nadezhnosti raboty ustroystv energosnabzheniya (Increasing Operating Reliability of Power-supply Installations) Moscow, Transzheldorizdat, 1958. 101 p. (Series: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy, vyp. 148) 2,000 copies printed.

Sponsoring Agency: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta

Ed.: Kudryavtsev, M.V., Engineer; Tech. Ed.: Bobrova, Ye.N.

PURPOSE: This collection of articles is intended for scientists, engineers and technicians working in railroad electrification.

COVERAGE: The articles cover the following subjects: determination of steady-state short-circuit currents, d-c arc rupture in horn-type arresters, method of preventive testing of insulators without
Card 1/4

Increasing Operating Reliability (Cont.)

SOV/1450

Radchenko, V.D., Candidate of Technical Sciences. Electric Arc Rupture in D-C Horn Arresters

34

The author provides results of tests on these protective devices and presents oscillograms and photographs of disconnect processes for various types of short-circuit current. He explains the effect of horn shape and air currents (wind) on the electric arc-forming process. There are 4 references, of which 3 are Soviet and 1 English.

Sukhoprudskiy, N.D., Candidate of Technical Sciences. Methods of Preventive Testing of Trolley-line Insulators Without Dismantling

45

The author demonstrates theoretically the possibilities of locating defective insulators by the wave method. He also presents the results of checking the proposed testing methods under actual operating conditions. There are 5 Soviet references.

Sokolov, S.D., Candidate of Technical Sciences. Methods of Increasing the Operating Reliability of Inverters

70

Investigation was carried out in 1956 by the Uralelektroapparat zavod (Ural Electrical Equipment Plant) and TsNII MPS on a three-phase inverter bridge circuit installed at the Tavatuy Traction Card 3/4

SUKHOPRUDSKIY, N. D.

8(2), 32(3)

PHASE I BOOK EXPLOITATION SOV/2471

Radchenko, Viktor Danilovich, Sergey Dmitriyevich Sokolov, and Nikolay Dmitriyevich Sukhoprudskiy

Perenapryazheniya i toki korotkogo zamykaniya v ustroystvakh elektrifitsirovannykh zheleznnykh dorog postoyannogo toka (Overvoltages and Short-circuit Currents in Systems of Electrified DC Railroads) Moscow, Transzheldorizdat, 1959. 303 p. 3,000 copies printed.

Ed.: S. K. Krylov, Engineer; Tech. Ed.: P. A. Khitrov.

PURPOSE: This book is intended for engineering and technical personnel of electrified railroads and for personnel of plants engaged in the construction and repair of rolling stock equipment.

COVERAGE: The authors discuss excess voltages occurring in electric traction systems and their effect on the operation of rolling stock equipment and traction substations. They also describe methods of testing the insulation of equipment and methods of calculating short-circuit current parameters. The basic principle of operation of circuits used for the protection of

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Overvoltages and Short-circuit Currents (Cont.)

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AVAILABLE: Library of Congress

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JF/mg
12-10-59

SUKHOFRUDSKIY, N.D.

Be persistent in the application of automation and remote control.
Elek.i tepl.tiaga 6 no.5:13-14 My '62. (MIRA 15:6)

1. Rukovoditel' laboratorii avtomatiki i telemekhaniki Vsesoyuznogo
nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta
Ministerstva putey soobshcheniya.

(Electric railroads)
(Automation) (Remote control)

BENESHEVICH, I.I., kand. tekhn. nauk; OVLASYUK, V.Ya., kand. tekhn. nauk; SUKHOPRUDSKIY, N.D., kand. tekhn. nauk; SHALIMOV, M.G., kand. tekhn. nauk; BANVER, Z.M., inzh., retsenzent; KOLISH, L.G., inzh., retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; USENKO, L.A., tekhn. red.

[Automation and remote control of the power supply systems of electric railroads] Avtomatizatsia i teleupravlenie ustroistvami energosnabzhenia elektricheskikh zheleznykh dorog. Moskva, Tranzheldorizdat, 1963. 359 p.

(MIRA 16:7)

(Electric railroads--Substations) (Automation)
(Remote control)

ACCESSION NR: AT4039556

S/2917/63/000/261/0004/0046

AUTHORS: Ovlasjuk, V. Ya. (Candidate of technical sciences); Suk-
hoprudskiy, N. D. (Candidate of technical sciences)

TITLE: Problems in the reliability of operation of modern elec-
tronic systems for automatic control

SOURCE: Moscow. Vsesoyuzny*y nauchno-issledovatel'skiy institut
zheleznodorozhnogo transporta. Trudy*, no. 261, 1963. Beskontakt-
ny*ye elementy* v skhemakh avtomatiki i teleupravleniya ustroystv
energospabzheniya (Contactless elements in automatic and remote con-
trol circuits of power supply devices), 4-46

TOPIC TAGS: automatic control development, quality control, equip-
ment reliability, industrial equipment, scheduling, test equipment

ABSTRACT: The automatic control systems in question pertain primarily
to the power supplies for electrified railways (types BST-59, BTR-60,

Card 1/3

ACCESSION NR: AT4039556

quality control. Advances in design and operation methods included personnel training and development of instrumentation and record keeping. The section headings are: Factors determining apparatus reliability. Problems in development of apparatus (electronic circuit elements, circuitry problems, load capacity of circuit elements, interference immunity, standardization of circuits). Construction of units. Production of apparatus. Operation of apparatus. Orig. art. has: 13 figures and 3 formulas.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NR REF SOV: 000

OTHER: 007\

Card 3/3

SUKHOPRUDSKIY, N.D.; KUT'IN, A.I.

Electric power distribution workers exchange their experience in the use of automatic control equipment. Elek. i tepl. tiaga 7 no.3218-19 Mr '63. (MIRA 1686)

1. Rukovoditel' laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Sukheprudskiy). 2. Starshiy inzhener laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Kut'in).

(Electric railroads—Substations)
(Electric railroads—Electric equipment)

OVLASYUK, V.Ya., kand.tekhn.nauk; SUKHOPRUDSKIY, N.D., kand.tekhn.nauk

Telemechanization of the electric power supply stations. Zhel.dor.
transp. 45 no.7:73-76 J1 '63. (MIRA 16:9)
(Electric railroads--Substations) (Remote control)

SUKHOFRUDSKIY, N.D., kand. tekhn. nauk

Reliability and operation organization of remote control
apparatus for electric power supply stations. Trudy TSNIi MPS
no.27635-15 '64. (MIRA 17:8)

OVLASYUK, V.Ya., kand. tekhn. nauk; STRAMNOV, Yu.S., inzh.;
SUKHOPRUDSKIY, N.D., kand. tekhn. nauk

Use of the TE-62 system for the remote control of electric
locomotives. Trudy TSNII MPS no.276:47-63 '64.

(MIRA 17:d)

RAYNES, Roman Lazarevich; GORYANOV, Oleg Aleksandrovich. Prinimal
uchastiye ZHOZHIKASHVILI, V.A., kand. tekhn. nauk;
SUKHOPRUDSKIY, N.D., kand. tekhn. nauk, retsenzent
YUKASOV, A.N., red.

[Remote control] Teleupravlenie. Izd.2., perer. Moskva,
Energiia, 1965. 535 p. (MIRA 18:2)

BULATOV, Toriy Antonovich, inzh.; GRIN'KOV, Boris Nikolayevich,
inzh.; KUT'IN, Aleksandr Ivanovich, inzh.; MANUKHOV,
Vitaliy Andreyevich, inzh.; SUKHOBRUDSKIY, N.D., red.;
AYBASHEVA, T.V., red.

[Automatic systems of d.c. traction substations] Ustroi-
stva avtomatiki tiagovykh podstantsii postoiannogo toka.
[By] T.A.Bulatov i dr. Moskva, Transport, 1965. 215 p.
(MIRA 18:2)

L 24543-66 EWT(d)/EWP(1) IJP(c) BG
ACC NR: AP6006326

SOURCE CODE: UR/0413/66/000/002/0048/0048

AUTHORS: Ovlasyuk, V. Ya.; Sukhoprudskiy, N. D.; Strammov, Yu. S.; Trifonov, I. I.

ORG: none

29
B

TITLE: A frequency system of remote control. Class 21, No. 177954

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 48

TOPIC TAGS: remote control, frequency control, system reliability

ABSTRACT: This Author Certificate presents a frequency system of remote control for distributed objects. The system includes frequency selectors of the group, of the character of operation, and of the number of the object. The system also includes frequency shapers of the object of the remote signal system. The design increases the reliability of the operation. The group selector is connected to the input of the power supply bus bars of the character of operation selectors. The number of the object selector and the character of operation selector are connected to the input of the power supply bus bars of the output relays. The power supply bus bars of the receivers of the character of operation selectors are connected through a rectifier bridge to the output of the group receiver. The receivers of

Card 1/2

UDC: 621.398.654.94

L 24543-66

ACC NR: AP6006326

the number of object selectors contain two output transformers with rectifier bridges. One output of the primary winding of both transformers is connected to the collector of the output triode of the object number selector. The other output of the primary winding of both transformers is connected to the output of the rectifier bridges. The remote signal system pulse shapers are connected to the output of the time-shaping circuit.

SUB CODE: 09/ SUBM DATE: 26Dec63

Card 2/2. *M/S*

ACC NR: AT7006011

(A)

SOURCE CODE: UR/2917/66/000/315/0161/0169

AUTHOR: Ovlasyuk, V. Ya. (Candidate of technical sciences); Sukhoprudskiy, N. D. (Candidate of technical sciences); Khal'kov, V. S. (Engineer)

ORG: None

TITLE: Operational data on EST-62 remote control units

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy, no. 315, 1966. Elektronnyye skhemy avtomatiki i zashchity tyagovykh podstantsiy zheleznnykh dorog (Electronic circuits for the automation and protection of railroad substations), 161-169

TOPIC TAGS: remote control system, railway equipment, railway engineering, reliability engineering

ABSTRACT: The authors discuss the introduction of remote control equipment in the power supply units of Soviet electrified railways. Experimental data are given on the EST-62 remote control system developed by the All-Union Scientific Research Institute of Railroad Transportation on the basis of operational experience with BST-59 and BTR-60 remote control systems. Experimental models of EST-62 units were put into operation on the Moscow-Ramenskoye Line in 1963. Eight control points were installed in the first half of the year and 15 were in operation by the end of the year. The con-

Card 1/2

ACC NR: AT7006011

trol equipment showed a failure rate of 1.3% in the period from September 1963 to March 1965, only 0.3% of these failures being observed in the EST-62 units. This is only half the rate observed for BST equipment. The distribution diagram for transistor failures shows a break-in period of about a year followed by a sharp drop in the number of failures. Accumulated data are summarized with a breakdown into separate components according to dispatch and control points. It is shown that the accrued time to failure for a single control point is 13,000 hours, with corresponding figures of 6500 hours for a single set of dispatch and control points and 1100 hours for an entire unit including power equipment, connecting line, etc. The average running time between major repairs for an entire unit is 73 hours. The accrued operating time to failure of the entire complex may be increased by using electronic systems for automation and protection, making the power equipment more reliable and further improvement of the remote control unit. Orig. art. has: 3 figures, 6 tables.

SUB CODE: 13/ SUBM DATE: None

Card 2/2

NAZARETOVA, N.B.; BASHILOV, A.A.; AMERIK, B.K.; KRECHETOVA, P.I.;
OVSYANNIKOV, P.V.; SUKHOZEBRIKOV, A.P.

Industrial experiments on the destructive distillation of fuel
oils. Trudy GrozNII no.4:48-59 '59. (MIRA 12:9)
(Petroleum products) (Distillation, Destructive)

2236 Sukhorebryy G. and Popov, A.

Hekotor'ye Boprssy Organizatsii Rabot V Vinogradarstve. (Kolkhoz "Biruintsa"
Kishch Inevskogo Rayona). Kishinev, Moldavgiz, 1954. 16s. 16sm. (Glav. UPR. s.
kh. Propagandy M-Va Sel'skogo Khozyaystva Moldav. SSR. B-Ka Kolkhoznika).
3.000 EKZ. 1^o k.--Na Moldav Yaz.-
(54-56058)

634.8 : 631.15 (47.75)

LIVYY, G.V., kani.tekhn.nauk; KACARINA, N.N., inzh.; BRADINSKII, M.S., inzh.
SUKHOREBRYI, V.A., inzh.

Continuous diffusion of tanning materials in a rotating diffuser
unit. Nauch.-issl.trudy Ukr NIIKP no.13:68-76 '62.

(MIRA 18:2)

PONYATOVSKIY, V.V.; SUKHORETSKAYA, N.M.; SHUVALOVA, N.S.

New materials for packing food products. Zhur. VKHO 5 no.4:413-
419 '60. (MIRA 13:12)

(Food handling)

L. N. NIN, B. N. ... KHOROLDOVA, I. I.

Separation and determination of halogens when they are present
together in organic compounds, Zhur. anal. khim. 19 no.6:742-745
'64. (MIRA 18:3)

1. Institut khimii Ural'skogo filiala AN SSSR, Sverdlovsk.

SUKHORSKAYA, I.M.; SUKHORSKIY, R.F.

Nature of the violet color of the Lower Cretaceous variegated
sediments in the Chernukhin region (Dnieper-Donets Lowland),
Trudy UkrNIGRI no.5:367-370 '63. (MIRA 18:3)

USSR / Microbiology. General Microbiology.

F-1

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 21790

Author : Sukhoretzkiy, B.S.

Inst :

Title : The Problem of Peculiarities in Bacterial Reproduction.
(preliminary report).

Orig Pub: Uch. zap. Vitebskogo vet. in-ta, 1953, 12, 81-86

Abstract: No abstract.

Card : 1/1

-4-

F

Country : USSR
Category : Microbiology. Microbes Pathogenic For Man and Animals.
Aerobic Bacilli
Abs. Jour : Ref Zhur-Biol., No 29, 1958, No 103862
Author : Sukhoretzkiy, B. S.
Institut. : Vitebsk Veterinary Institute Reaction on
Title : Dependence of the Precipitation on the Concentration
of Antigen in an Extract
Orig. Pub. : Uch. zap. Vitebskogo vet. in-ta, 1956, 14, No 1, 69-75.
Abstract : Extracts for the precipitation reaction were prepared
by means of the extraction of precipitinogen with
phenolized physiological solution (1:10) from sterilized
and ground up samples of skin, known to be positive for
anthrax, with subsequent filtration through asbestos.
A specific polysaccharide was obtained by the Pochon
method of extracting anthrax bacilli with trichloro-
acetic acid. The precipitation reaction was performed
at room temperature and examined every one or two
minutes. In experiments with extracts and polysaccha-
ride the precipitation reaction occurred quicker the
less they were diluted. The author believes that
the period of observation of the precipitation reaction

Card: 1/2

USSR/Microbiology - General Microbiology, Systematics,
Morphology, Cytology.

F

Author : Sukhoretzkiy, B.S.

Inst : Vitebsk Veterinary Institute

Orig Pub : On Various Properties of Development of Bacteria of the
Species Erysipelas suis.

Orig Pub : Uch. zap. Vitebskogo vet. in-ta, 1957, 15, 19-30

Abstract : On the basis of the study of morphological properties
of developing cultures, the author relates E. suis to
mycobacteria and proposes to call it Mycobacterium
erysipelatis suis.

Card 1/1

- 6 -

LOPATINSKIY, V.P.; SIROTKINA, Ye.Ye.; SUKHROSLOVA, M.M.

9-Acetylcabazole. Metod. poluch. khim. reak. i prepar.
no.11:28-30 '64. (MIRA 18:12)

1. Tomskiy politekhnicheskii institut imeni S.M. Kirova.
Submitted April 1964.

LOPATINSKIY, V.P.; SIROTKINA, Ye.Ye.; SUKHOROSLOVA, M.M.

9-Methylcarbazole. Metod. poluch. khim. reak. i prepar.
no.11:69-72 '64. (MIRA 18:12)

1. Tomskiy politekhnicheskii institut imeni S.M. Kirova.
Submitted April, 1964.

PLYUSNIN, V.G.; SUKHOROSOVA, T.I.

Regularities in benzene ethylation. Trudy Inst.khim. UFAN SSSR
no.4:21-32 '60. (MIRA 16:6)
(Benzene) (Ethylation)

SUKHORSKIY, R.F.

35939 YERMAKOV, N.P. i SUKHORSKIY, R.F. krivaya dlya vizual'nogo
opredeleniya temperatury obrazovaniya gidrotermal'nogo
dvartsa. mineral. sbornik (I'vov), No 3, 1949, S. 143-49

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

D. I. GURIN, N. N.

"The Temperature Cycle of the Formation of Some Crystal-bearing Deposits of Aldan." *Zam. Geol.-Min. Sci., Mineral. Petrographic Laboratory, Lvov State Univ. Ivan Franko, Lvov, 1954.* (No. 10, Mar 55)

SC: Sma. No. 670, 29 Sep 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (1)

BILYK, O.D.; SUKHORSKIY, R.F.

Studying lower Cretaceous sediments in the northwestern part of the
Dnieper-Donets Lowland. Trudy UkrNIGRI no.1:113-121 '59.

(MIRA 12:12)

(Dnieper Lowland--Geology, Stratigraphic)

(Donets Basin--Geology, Stratigraphic)

BILYK, Oleg Denisovich; KANSKIY, Nikolay Yeliseyevich; MAKRIDIN, Vladimir Petrovich; STERLIN, Boris Pavlovich; SUKHORSKIY, Roman Filippovich; LAPKIN, I.Yu., otv.red.; KURILOVA, T.M., red.; BELOKON', V.V., tekhn.red.

[Facies and paleogeography of Jurassic sediments in the oil- and gas-bearing area of the eastern Ukraine] Fatsii i paleogeografiia iurskikh otlozhenii Vostochno-Ukrainskogo gazoneftenosnogo basseina. Khar'kov, Izd-vo Khar'kovskogo gos.univ., 1960. 71 p.
(MIRA 14:4)

(Ukraine--Paleogeography) (Ukraine--Geology, Stratigraphic)

BILYK, O.D.; MAKRIDIN, V.P. [Makrydin, V.P.]; MIGACHEVA, Ye.Ye. [Myhachova, IE.IE.]; STERLIN, B.P.; SUKHORSKIY, R.F. [Sukhors'kyi, R.F.]

Stratigraphy of Jurassic sediments in the eastern Ukraine.
Geol. zhur. 23 no.5:102-103 '63. (MIRA 16:12)

1. UkrVNDIGaz.

SUKHORSKAYA, I.M.; SUKHORSKIY, R.F.

Nature of the violet color of the Lower Cretaceous variegated
sediments in the Chernukhin region (Dnieper-Donets Lowland).
Trudy UkrNIGRI no.5:367-370 '63. (MIRA 18:3)

SUKHORSKIY, R.F.

Temperature conditions governing the formation of rock crystal
in the Aldan. Dokl. AN SSSR 161 no.5:1188-1190 Ap '65. (MIRA 18:5)

1. Institut geologii i geokhimii goryuchikh iskopayemykh AN
UkrSSR. Submitted November 17, 1964.

BOGATIKOV, Anatoliy Semenovich; SUKHORUCHENKO, Ivan Aleksyevich;
AVSEYENOK, A.F., otv.red.; TSUKHMAN, S.Ya., red.izd-vo;
SABITOV, A., tekhn.red.

[Automatic regulators for jigging machines] Avtomaticheskije
regulatory otsadochnykh mashin. Moskva, Ugletekhizdat, 1959.
20 p. (MIRA 12:9)

(Coal preparation--Equipment and supplies)
(Ore dressing--Equipment and supplies)

SUKHORUCHENKO, M.N., SANYGIN, P.I.

"The Structure of Fishing Industry in the USSR-Administration and Management."

Report presented at the FAO Seminar and Study Tour for Fishery Administrators
from the Indo-Pacific and Mediterranean Regions, Moscow 11Sep-14 Oct 1961.

KOROSTOV, Ye.M.; FEL'DMAN, I.Kh.; SUKHORUCHENKO, M.S.

Adopt the method of hydrolyzate neutralization with ammonia water.
Gidroliz. i lesokhiz. prom. 16 no.3:23-24 '63. (MIRA 16:5)

1. Vostochno-Sibirskiy sovet narodnogo khozyaystva.
(Hydrolysis)

ACC NR: AP6009899 SOURCE CODE: UR/0413/66/000/004/0091/0091

INVENTOR: Babkin, M. I.; Bivin, Yu. K.; Voytsakhovskiy, A. I.; Alekseyev, L. I.; Sukhoruchenko, V. A.

ORG: none

55
B

TITLE: Device for generating pressure pulses in a liquid. Class 42, No. 179050

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 91

TOPIC TAGS: hydraulics, hydraulic control, hydraulic control system, pulse generator

ABSTRACT: The proposed device contains a working chamber connected to a hydraulic cylinder with a piston which senses the kinetic energy of the feed load by means of a gage. To generate various-shaped pressure pulses and to regulate the moment of initiation and the rate of pressure drop in the working chamber, the piston is made in the form of a glass which is covered on the bottom by a diaphragm which ruptures at a given pressure. The glass has a longitudinal slit and radial openings which connect the internal piston cavity at a certain position in respect to a cylinder with an

Card 1/2

UDC: 621.227.3:620.1.05

L 21522-66

ACC NR: AP6009899

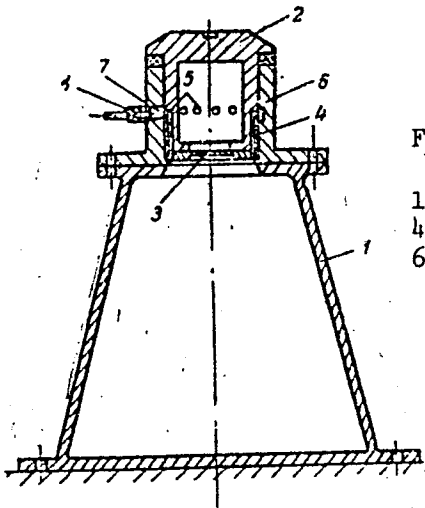


Fig. 1. Liquid pulse generator

- 1 - Working chamber; 2 - piston; 3 - diaphragm;
- 4 - longitudinal slot; 5 - radial openings;
- 6 - cylinder; 7 - annular groove; 8 - throttle.

annular groove on the internal surface of the latter. The groove is connected through a throttle to the overflow duct (see Fig. 1). Orig. art. has: 1 figure. [TN]

SUB CODE: 21/ SUBM DATE: 26Jan65/ ATD PRESS: 4222

Card 2/2 ddu

SYROMYATNIKOV, V.F., kand. tekhn. nauk; SUKHORUCHENKOV, N.V.

Newly designed fuel-heating unit. Trudy TSNIMF no.20:78-84
'58. (MIRA 12:1)

(Marine engines) (Heat exchangers)

SUKHORUCHKIN, G.A., kandidat tekhnicheskikh nauk.

Simple and economical joining of sectional pipelines. Gidr. i mel.
8 no.8:17-22 Ag '56. (MLRA 9:9)
(Pipelines)

SUKHORUCHKIN, I.; VOLKOVA, A.

Shortcomings in planning and financing geological prospecting.
Fin. SSSR 19 no.1:68-97 Ja '58. (MIRA 11:2)

1. Starshiy inspektor Prombanka SSSR. (for Sukhoruchkin). 2. Zamestitel' upravlyayushchego Magadanskoj oblastnoy kontoroy Prombanka (for Volkova).

(Geology, Economic)

SHEYKIN, G.Yu., kand.tekhn.nauk; SUKHORUCHKIN, I.A., kand.tekhn.nauk
GORBUNOVA, Ye.N., mladshiy nauchnyy sotrudnik; SURIN, V.A.,
mladshiy nauchnyy sotrudnik

Automatic distribution of water by closed stationary conduits.
Gidr.i mel. 12 no.7:1-12 J1 '60. (MIRA 13:7)
(Irrigation canals and flumes)

ROBOTOV, V.T.; NOVITSKIY, M.D.; LITVINETS, I.V.; RACHKOVSKAYA, Yu.N.;
SUKHORUCHKIN, I.S.; NADEZHINA, A., red.; TELEGINA, T., tekhn.red.

[Building inspection during construction; practical handbook]
Kontrol'nye obmery v stroitel'stve; prakticheskoe posobie. Sost.
kollektivom avtorov pod rukovodstvom V.T.Robotova. Moskva, Gos-
finizdat, 1959. 275 p. (MIRA 13:1)

1. Vsesoyuznyy bank finansirovaniya kapital'nykh vlozheniy (for
Robotov, Novitskiy, Litvinets, Rachkovskaya, Sukhoruchkin).
(Building inspection)

BURMESTROV, G.I., SUKHORUCHENIN, Yu.V.

Synthesis of substituted 2-arylaminoimidazoles. Zhur. org. khim.
1 no.1s185-189 Ja '65. (MIRA 18:5)

I. Dnepropetrovskiy khimiko-tekhnologicheskii institut.

NIKITIN, S. Ya.; GALANINA, N. D.; IGNAT'YEV, K. G.; OKOROKOV, V. V.; SUKHORUCH-
KIN, S. I.

[Measuring total neutron cross sections of isotopes in uranium-233, uranium-235, plutonium-239 by the flickering beam method]
Izmerenie polnykh neitronnykh sechenii izotopov urana-233, urana-235, plutonia-239 metodom migalushchego puchka; doklady, predstav-
lenyye SSSR na Mezhdunarodnuu konferentsiiu po mirnomu ispol'zo-
vaniu stonnoi energii. Moskva, 1955. 10 p. [Microfilm]

(MIRA 9:3)

(Nuclear physics) (Uranium) (Plutonium)

~~XXXXXXXXXX~~
SUKHORUCHKIN, S. I.

900
RML

4075 AEC-tr-2435 (Pt. 1) (p.81-94)
DEPENDENCE OF THE EFFECTIVE NUMBER OF
SECONDARY NEUTRONS ON THE ENERGY OF CAPTURED
NEUTRONS. PART I. S. Ya. Nikitin, S. I. Sukhoruchkin,
K. G. Ignatyev (Ignat'ev), and N. D. Galanina. PART II.
S. Ya. Nikitin, P. A. Krunchitsky (Krupchitski), and V. F.
Beikin. p.81-94 of CONFERENCE OF THE ACADEMY OF
SCIENCES ON THE USSR ON THE PEACEFUL USES OF
ATOMIC ENERGY, JULY 1-5, 1955. SESSION OF THE
DIVISION OF PHYSICAL AND MATHEMATICAL SCIENCES
(Translation). 14p.

7

140
RML

This paper was originally abstracted from the Russian
and appeared in Nuclear Science Abstracts as NSA 9-7891.

RML

SUKHORUCHKIN, S. I.

51-1000

The effective number of secondary electrons as a function of the energy of the captured primary electrons. I. S. Ya. Nikitin, S. I. Sukhoruchkin, K. G. Ignat'ev, and N. D. ~~...~~ Galant'ev. Sessiya Akad. Nauk S.S.S.R. po Mirnomu Ispol'zovaniyu Atomnoy Energii, Zasedaniya Otdel. Fiz.-Mat. Nauk 1955, 87-89 English summary 103-7. The results of measurements of the capture of slow neutrons by the transmission method and of the fission by counting the secondary neutrons were used to det. the energy function of secondary electrons ν_{eff} . $\nu_{eff} = \nu \sigma_f / \sigma_c$, where ν = the no. of secondary electrons in the act of fission, σ_f and σ_c are the fission cross section and the capture cross section, resp. A 128-channel neutron time-of-flight selector was used together with a cyclotron. σ_c , σ_f , and ν_{eff} were measured in the energy interval from 0.0084 to 11.33 e.v.; the neutrons were traced by aid of a ZnS screen with an Ag activator.

Both σ_f and σ_c show a no. of resonances. For several levels the fission width Γ_f and the radiation width Γ_γ were detd.; the Γ_f showed wide variations. The method used to find ν_{eff} does not take into consideration any self-shielding of the sample, thus the value ν_{eff} could be obtained as the av. for several resonance levels. The ratio ν_{eff}/ν_{theor} for the thermal region varies for different groups of resonances for U^{235} 0.85-1.08, for U^{238} 0.6-0.9, for Pu^{239} 0.85-1.15. II. S. Ya. Nikitin, P. A. Krupchitskii, and V. F. Beikin. Ibid. 1956 English summary, 107. — The ratio of the ν_{eff} for neutrons of intermediate energies to that for the thermal energies was measured for U^{235} . The intermediate neutron spectrum contained neutrons from 0.5 to 1000 e.v. This spectrum was obtained by a neutron-energy transformer consisting of a D_2O tank and a B-slab lattice. A U block at the bottom of the tank served as source of neutrons. It was irradiated by thermal neutrons from the vertical exptl. channel of the D_2O research reactor. The tank also contained neutron detectors, i.e. fission chambers lined with ^{235}U and a proportional counter lined with B. During the measurements the fission chamber was shielded by cylindrical B filters and the counter by U^{235} filters. The thermal neutron spectrum was obtained in the tank after removal of the B-lattice. The ratio $\nu_{eff\ measured} / \nu_{eff\ theory}$ was 1.02 ± 0.03 . The excess of the fission cross section of U^{235} was 3.32 ± 0.02 .

W. J.

ML

SUKHORUCHKIN, S. I.

"Measurement of the Effective Number of Secondary Neutrons Emitted by Pu²³⁹ for Primary Neutrons in the Energy Range 7-30 ev," by I. V. Kirpichnikov, V. V. Okorokov, and S. I. Sukhoruchkin, Atomnaya Energiya, Vol 2, No 3, Mar 57, pp 247-252

The article describes measurements of the dependence of γ_{eff} for Pu²³⁹ on energy over the range 7-30 ev. $\gamma_{eff} = \gamma \cdot (\sigma_f / \sigma_a)$, where γ is the average number of fast neutrons per fission event, σ_f is fission cross section, and σ_a is absorption cross section. "Knowledge of this quantity is necessary for reactor calculations and the theory of nuclear fission."

The number of fast neutrons emitted by a Pu²³⁹ sample, which was irradiated with slow neutrons, was measured.

"The increased resolution of the neutron selector permitted measurement of the ratio of fission width to radiation width for the various resonances. It was assumed in these measurements that γ is a constant over all energies."

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It was found that the fission widths of Pu²³⁹ levels differ considerably from one another and that they can be grouped around the values ~20 mv and ~60-80 mv.

The radiation widths were found to vary considerably from level to level. "Such behavior requires further study, since such large changes in radiation width have not previously been noted."

Agreement with other work was noted in the values found for Verr.

Acknowledgement is made to S. Ya. Nikitin "for his advice and constant interest." (U)

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VLADIMIRSKIJ, V. V. and SUKHORUCHKIN, S. I.

"A Review of Some New Data on of Neutron Effective Cross-Section and Fission Process Investigations."

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

SOV/120-50-4-3/50

AUTHORS: Ignat'yev, K. G., Kirpichnikov, I. V., Sukhoruchkin, S. I.
TITLE: A Neutron Spectrometer Using a Polarized Cyclotron Beam
PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 25-31
(USSR)

ABSTRACT: A description is given of a 256-channel neutron analyzer. A cyclotron with a vertical deflection of the deuteron beam onto an internal target is used as the neutron source. This gives high density neutron pulses about 0.1 μ sec long. The channel width can be 0.25, 1, 2, 4, 8, 16 and 32 μ sec. The time interval required is set by a choice of one of the above channel widths and a delay made up of a combination of one of the following time intervals: 0, 16, 32, 64, 128, 256, 512, 1024, 2048, and 4096 μ sec. The length of the working cycle T depends on the experimental conditions and may be one of the following: 512, 1024, 2048, 4096 or 8192 μ sec. The best resolution obtained was 0.024 μ sec/m. This corresponds to a flight path of 15 m. The corresponding upper limit for the energy at which the measurements are carried out is 100 eV. The total relative error in the determination of the flight time is 0.20%. A brief description is also given of the method whereby the deuteron beam is deflected on to the internal target. Fig 1 shows a schematic drawing of the

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A Neutron Spectrometer Using a Polarized Cyclotron Beam

vertical deflection system. In Fig 1 1 is the deflecting plate, 2 is the cyclotron beam, 3 is the target, 4 is the absorber and 5 is the boron carbide screen. Fig 2 shows the circuit of the generator of the deflecting pulses and Fig 4 shows the form of a pulse of fast neutrons from the target. The upper curve corresponds to the case where the vertical deflection pulse is not applied and the lower curve corresponds to the case in which the vertical is applied. There are 7 figures, 1 table and 7 references, of which 4 are English and 3 are Soviet.

SUBMITTED: May 17, 1958.

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S/903/62/000/000/042/044
B102/B234

AUTHORS: Ignat'yev, K. G., Kirpichnikov, I. V., Kozodayeva, N. M.,
~~Sukhoruchkin, E. I.~~

TITLE: Investigation of the γ -rays from neutron resonance capture by
heavy nuclei

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 551

TEXT: A brief communication is given on investigations of the γ -ray spectra and angular correlations in the case of neutron resonance capture by W, Pt, Xe, and Ag. The neutron energy was measured by the time-of-flight method with a multi-channel selector. The γ -rays were analyzed with the help of scintillation spectrometers and a pair spectrometer. The spins of several resonance levels were determined by comparing the ground-state transition intensities and measuring the angular correlation of the cascade γ -rays: $I = 1$ for W¹⁸³ with $E_0 = 7.6$ and 26 ev, for Pt¹⁹⁵ with $E_0 = 11.9, 19.6$ and 68 ev, and for Xe¹²⁹ with $E_0 = 9.5$ ev; $I = 0$ for $E_0 = 102$ ev of W¹⁸³. The Card 1/2

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intensities of the transitions from different levels to the ground state differ greatly.

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