

~~PESTOV, Yefrem Mikhaylovich~~, kandidat sel'kokhozyaystvennykh nauk
[deceased]; SERGEYEV, V.I., redaktor; ZUBRILINA, L.P., tekhnicheskii
redaktor

[Rowan] Rishina. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1962, 150 p.
(Rowan) (ML 10:10)

PETROV, Ye. M., Engineer

"From Large-Block to Large-Panel Construction." Sub 15 May 51, Academy of Communal Economy imeni K. D. Pamfilov

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

ASKINAZI, Z.M., inzh.; PETROV, Ye.M., inzh.

History of the "Salolin" hydrogenation plant. Masl.-zhir. prom. 23
no.8:25-27 '57. (MIRA 10:12)

1. Leningradskiy zavod "Salolin".
(Oils and fats) (Hydrogenation)

PETROV, YE.M.

Service Tree

Crimean large-fruit service tree. Priroda 41 no. 4, 1952

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

PETROV, Ye.N.

Characteristics of the Tomi river bed structure. Biul.Kom.chetv.
per. no.19 38-49 '53. (MLBA 7:11)
(Tomi Valley--Geology) (Geology--Tomi Valley)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,
p 151 (USSR) 15-57-4-5141D

AUTHOR: Petrov, Ye. N.

TITLE: Structure of the Meso-Cenozoic Cover and Gas-
Petroleum Potential of the Southwestern Western
Siberian Lowlands (Stroyeniye mezokaynozoyского
pokrova yugo-zapadnoy chasti Zapadno-Sibirskoy
nizmennosti v svyazi s voprosami neftegazonosnosti)

ABSTRACT: Bibliographic entry on the author's dissertation for
the degree of Candidate of Geological and Mineral-
ogical Sciences, presented to Tomskiy un-t (University
of Tomsk), Tomsk, 1956

ASSOCIATION: Tomskiy un-t (University of Tomsk)
Card 1/1

Petrov, Y. N.
PETROV, Y. N.

Meso-Cenozoic structure of the southwestern part of West Siberian
Lowland. Trudy Gor.-geol. inst. Zap.-Sib. fil. AN SSSR no.15:93-
108 '56. (MIFA 11:1)
(Siberia, Western--Geology, Stratigraphic--Cenozoic)

PETROV, Ye.N.

Structural characteristics of the southern trans-Ural Mountain region.
Neft.khoz.34 no.6:42-45 Je '56. (MLRA 9:9)
(Ural Mountain region--Geology, Stratigraphic)

3(8)

DDW/10-59-11100

AUTHOR: Zyat'kova, L.K., and Petrov, Ye.N.

TITLE: A Geologic-Geomorphological Method of Structural Prospecting (As Carried in the Vakh River Basin)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 4, pp 73-78 (USSR)

ABSTRACT: The article is concerned with the aerial method of mapping anticlinal elevations in the basin of the Vakh river, right tributary of the Ob' river. The aerial method, in combination with geophysical investigations, can give valuable data on oil and gas occurrence in the bogged and wood-covered areas of the West Siberian Plain, where geological studies are extremely hard to conduct. The map sketches (Figure 1 and 2) show anticlinal elevations in the basin of the Vakh river, the contours of which were ascertained by both aerial mapping and drilling and geomorphological investigations. The article is

Card 1/2

000,10-77-4-5, 00

A Geologic-Geomorphological Method of Structural Prospecting
(As Carried in the Vakh River Basin)

mentions the Iar'yakskiy leynoy fond (Iar'yak Scientific Reserves) and the following authors of treatises on geology: G.T. Lingersgauzen, M.Ya. Rudkevich, and L.A. Ragozin. There are 2 map sketches, 2 photographs, and 3 Soviet references.

ASSOCIATION: Sibirskiy nauchno-issledovatel'skiy institut geologii geofiziki i mineral'nogo syr'ya (Siberian Scientific Research Institute of Geology, Geophysics, and Raw Minerals)

Card 2/2

3(2)

AUTHORS:

Petrov, Ye. N., Malikov, B. N.

SOV/6-59-6-13/22

TITLE:

The Problem of Enriching the Content of the Topographic Map on a Scale of 1 : 100,000 (K voprosu ob obogashenii soderzhaniya topograficheskoy karty mashtaba 1 : 100,000)

PERIODICAL:

Geodeziya i kartografiya, 1959, Nr 6, pp 44-49 (USSR)

ABSTRACT:

The present topographic map on a scale of 1 : 100,000 offers a very high accuracy of the field compilation survey but, on the other hand, it does not show all the details of terrain interesting for the geologist although these details appear in the aerial photographs. The authors carried out geologic-geomorphological investigations in the area of the Vakh Basin with the use of aerial surveys on a scale of 1 : 65,000. They point out some concrete shortcomings of the maps, and the methods of eliminating them. To clarify the history of motions in the Quaternary period, to determine the folded structures, and to search a number of mineral resources, the analysis of the morphology of river valleys is of great importance. There are, for instance, the so-called "hanging" valleys. They are formed when the erosion of the river is insufficient to surmount the rising fold, and the river changes its course to avoid the newly

Card 1/3

The Problem of Enriching the Content of the
Topographic Map on a Scale of 1 : 100,000

SO"/6-59-6-13/22

shaped elevation, leaving a distinctly formed valley in the old place (Fig 1). Such base can be seen by stereoscopic observation of the mentioned aerial photographs. The topographic map, however, does not contain these details (Fig 2). Figure 3 shows a variant suggested by the authors for the said area. Portions of the earth's surface, which drop considerably, are reproduced in form of "buried" river valleys in many cases. The initial stage of their evolution is sometimes to be traced back. In such case the sinking valleys are present covered by lakes or meads, and the boundaries of these marginal sections of valleys are distinctly marked in a stereoscopic viewing of aerial photographs (Fig 4). Besides, one can see the outlines of the "buried" river bed and of its affluents. On the topographic map on a scale of 1 : 100,000, the whole valley section is represented as a pathless marshland. The elements of the former hydrographic system, clearly visible in the aerial photographs, are not shown on the topographic map (Fig 5). In figure 6, the authors show a convenient representation of this area. As a rule, the topographic map 1 : 100,000 incompletely represents the elements of the marsh country relief which permit the evolution

Card 2/3

The Problem of Enriching the Content of the
Topographic Map on a Scale of 1 : 100,000

SOV/6-59-6-13/22

of the river bed to be traced. The topographic map must indicate the kinks of the longitudinal profile of the river, as well as the characteristic relief elements by which the direction of the present tectonic motion can be determined. The topographic map does not show the old lake basins and the small affluents which can be well seen stereoscopically from the relief as well as from the contrast in vegetation. In the area of the West-Siberian Depression, the river terraces are an important object of geologic-geomorphological investigations. They are not shown on the topographic map either. There are 9 figures.

Card 3/3

PETROV, Ye.N.

Phosphato-bearing Lower Silurian rocks in the Lower Tunguska
Basin. Sov. geol. 7 no.8:133-136 Ag '64.

(MIRA 17:10.)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,
geofiziki i mineral'nogo syr'ya.

PETROV, Ye.N.

On the road of a technological reorganization of the production.
Tekst.prom. 22 no.9:5-8 S '62. (MIRA 15:9)

1. Zamestitel' glavnogo inzhenera Pervoy moskovskoy shtsenabivnoy
fabriki.

(Textile industry)

PETROV, Ye.N.

Concerning the theory of a triode with plane electrodes and negative
charged grid. Radiotekh. i elektron. 7 no.8:1400-1403 Ag '62.
(MIRA 15:8)

(Triodes)

PETROV, Ye.N.; ZYAT'KOVA, L.F.

Methods and results of geological and geomorphological investigations carried out in order to study structures in the central areas of the West Siberian Plain. **Trudy SNIICGIS** 9:87-96 '60. (MLA 14:7)
(West Siberian Plain--Geology, Structural)

PETROV, Ye.N.

Concerning the theory of a plane-electrode triode with zero space charge in the plate-grid gap. Radiotekh. i elektron, 6 no.7:1170-1172 '61.

(Triodes)

(MIRA 14:6)

ZYAT'KOVA, L.K.; PETROV, Ye.N.

Analyzing longitudinal river profiles to find structures in the West
Siberian Lowland. Izv.AN SSSR.Ser.geog. no.3:89-90 My-Je '61.

(MIRA 14:5)

(West Siberian Lowland--Rivers)

PETROV, Ye.P., vrach (Leningrad)

On ski treks. Zdorov'ie 6 no.2:30-31 P '60.
(SKIS AND SKIING)

(MIRA 13:5)

PETROV, Yo. (Riga)

"Rigas Ekspresis" to the rescue... Zinl.-kom. kruz. li no.12:
25-26 D '611 (MIRA 16:11)

L 58354-65

ACCESSION NR: AP5016384

UR/0120/65/000/003/0114/0117
621.375.2.4

AUTHOR: Petrov, Ye. R.

TITLE: Solid-state d-c amplifier

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1965, 114-117

TOPIC TAGS: dc amplifier, dc to dc converter, semiconductor amplifier

ABSTRACT: A solid-state d-c amplifier design is presented which is considered to be relatively free of the detrimental effects associated with the utilization of semiconductor components. The circuit configuration and heavy d-c negative feedback help achieve 1% linearity and relative immunity from large transistor parameter spread, high temperatures, and line voltage variations. Two types, similar in construction but differing in performance, are described. The amplifiers are of a modular construction and consist functionally of a modulator, an a-c amplifier, and a demodulator. The modulator is a chopper in which the input d-c voltage is chopped at the line-frequency rate. The chopper signal is amplified and demodulated by two half-wave rectifiers wired in parallel. The input voltage range for the two types is 0-50 and 0-1000 mv; output-current range is 0-5 mamp; response time is 0.3 and 0.2 sec; tolerable load variation is 0-5 kohm. Orig. art. has: 1 figure. [BD]
Card 1/2

L 58354-65
ACCESSION NR: AP5016384 0

ASSOCIATION: none

SUBMITTED: 09May64

NO REF SOV: 004

ENCL: 00

OTHER: 000

SUB CODE: EC, SS

ATD PRESS: 4046

Card ¹¹ 2/2

PETROV, Ye.S.

Reaction of cesium on the surface of silica and alumina during heating
Izv.vost.fil.AN SSSR no. 4 -113 157 (MGRA 10 9)

1. Zapadno-Sibirskiy filial Akademiya Nauk SSSR
(Almaty)

FEDOROV, N.Ya.; SKLYARENKO, S.I. [deceased]; PETROV, Ye.S.

Melting diagram of the system $\text{SeCl}_4 - \text{NaCl}$. Izv. SO AN SSSR 48:11.
Ser.khim.nauk no.3:120-122 '63. (MIRA 17:3)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN
SSSR, Novosibirsk.

PETROV, Ye. S.: Master Chem Sci (diss) -- (On the interaction of silicic acids with silica and alumina upon heating". Novosibirsk, 1955. 22 pp (Acad Sci USSR, Inst of the Chem of Silicates), 110 copies (Kl., No 10, 1955, 12)

01/20/62/056/001/004/00-
3205/3302

AUTHORS: Faleyev, V.M., and Petrov, Ye.B.

TITLE: Melting diagram of the system In-Cl

INSTITUTION: Khimicheskaya Akademiya, Sibirskoye otdeleniye. Izv. v. 11, no. 4, 1962, pp. 1-7

ABSTRACT: The melting of different In-Cl mixtures was studied by means of differential scanning calorimetry (DSC) in the temperature range of 25 - 400°C. In. 91.1% and pure Cl was analyzed. The melting diagram was prepared. 24 mixtures of In and InCl₃ were studied. Due to the hygroscopicity of the InCl₃, all the measurements were performed in evacuated glass tubes which were heated and cooled in a furnace. In addition, the cooling rate being constant 10°C/min. The temperature changes were automatically recorded by a thermocouple recorder. The data of the investigation are summarized in the melting diagram (Fig. 3) which is compared with that of Cl-Cl₂. Several differences between the two diagrams are noted. The diagram points to the presence of 3 congruently melting compounds (InCl₃, InCl₂, InCl).

Card 1/3

Melting diagram of the system In-Cl

4.5 1981 11.11.1981
1215/1330

In₂Cl₃, InCl₃) and one independently melting component. The construction of a circuit which permits a simultaneous measurement of the temperature changes in a sample is described in the present report. There are 4 figures and 10 references: 3 Soviet and 7 non-Soviet ones. The 4 most recent references to the Russian-language publications read as follows: N.I. Zhurav and N. Zhurav, J. Amer. Chem. Soc., 80, no. 1, 1958; N.I. Zhurav, J. Amer. Chem. Soc., 78, no. 21, 1956; N.I. Zhurav, Zhurnal Khim. Fiz., 27, no. 1, 1950; I.K. Kikhen, Izv. Akad. Nauk SSSR, 1947, 1950.

ASSOCIATION: Khimiko-tekhnicheskii Institut (Sibirskiy nauchnyy tsentr AN SSSR, Novosibirsk (Chemical Institute, Institute of the Siberian Branch of the USSR Academy of Sciences, Novosibirsk))

Card 2/8

PETROV, V. F.

PHASE I BOOK EXPLOITATION SOV/5747

Rezhim nauki novykh khimiy po rezhim bachelochnym elementam. 1st, Novosibirsk, 1960.

Rezhim bachelochnyye elementy; sbornik dokladov soveshchaniya po khimii, tekhnologii i analiticheskoy khimii redkikh shchelochnykh elementov, 27-31 yanvarya 1959 g. (Rare Alkali Elements; Collection of Reports of the Conference on the Chemistry, Technology, and Analytical Chemistry of Rare Alkali Elements, Held 27-31 January, 1959) Novosibirsk, Izd-vo Sibirakogo otd. AN SSSR, 1960. 69 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskii institut.

Res. Ed.: T. V. Zabolotskiy, Candidate of Technical Sciences; Members of Editorial Board: A. S. Mikulinskiy, Professor, Doctor of Technical Sciences, A. T. Logvinenko, Candidate of Technical Sciences, F. P. Barkova, Candidate of Chemical Sciences; Ed.: V. N. Bushuyeva; Tech. Ed.: A. F. Mazurova.

Card 1/5

Rare Alkali Elements, Collection (Cont.)

SCN/5747

NOTE: This book is intended for chemical engineers and technicians working in metallurgical and mining operations and related enterprises.

COMMENTS: The collection contains reports which deal with the physical and analytical chemistry of rare alkali elements and their compounds and their reactions with mineral ores and salts. Methods of extraction and modern analytical techniques and equipment are also discussed. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

Uradov, G. B. (Deceased), V. V. Plyushchev, Yu. P. Simonov, and I. V. Sushko. [Moscow] Institut' tenkoy khimicheskoy tekhnologii im. (N.V.) Lomonosova - Moscow Institute of Fine Chemical Technology Acad. M. V. Lomonosov]. High-Temperature Modification of Specimens 5

Plyushchev, V. Ye. [Moscow Institute of Fine Chemical Technology

Card 2/5

- Rare Alkali Elements; Collection (Cont.) SOV/5747
- L. I. Lashenkov]. Physicochemical Investigation of the Process of the Interaction of Spongy Potassium With Sulfates of Alkali Metals 15
- S. I. Fedorov and T. F. Fedorov [Institut metallurgii im. I. V. Kurchatova AN SSSR - Institute of Metallurgy imeni Bekhov AN SSSR]. Kinetics of the Vacuum-Heating Method of Obtaining Potassium 25
- V. M. Kiselev [Gosudarstvennyy institut redkikh i raznykh metallov - State Institute of Rare and Minor Metals]. The Interaction of Potassium With Nitrogen 31
- A. S. [Sibirskoye otdeleniye AN SSSR - Siberian Division of the AN SSSR]. Some Relationships in the Interaction of Salts of Alkali Metals With Silica and Alumina and Properties of the Products Formed 43
- Logvinenko, A. T. and G. D. Uryvayeva [Khimiko-metallurgicheskii institut Sibirskogo otdeleniya AN SSSR - Institute of Chemical Metallurgy of the Siberian Department of the Academy

Card 3/5

PETROV, Ye.S.; FADEYEV, V.N.

Thermodynamic foundations of high-temperature chlorination of
polymetallic tin-bearing materials. Izv. Sib. otd. AN SSSR
no.9:59-68 '61. (MIRA 14:10)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

(Metallurgy)

(Chlorination)

FADEYEV, V.N.; PETROV, Ye.S.

Fusibility diagram of the system In -Cl. Izv.Sib.otd.AN SSSR
no.1:94-97 '62. (MIRA 15:3)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya
AN SSSR, Novosibirsk.
(Indium chlorides) (Melting)

PETROV, Ye.S.

International symposium on extremely pure substances in science and
technology. Izv.Sib.otd.AN SSSR no.1:108-109 '62. (MIRA 15:3)
(Mineral industries—Congresses)

PETROV, Ye.S., tekhnolog

Introduce the assembly-unit method of repair of track machinery.
Put' i put. khoz. 8 no.9:13-14 '64. (MIRA 1964)

1. Iz yekhtno-konstruktorskoye byuro Glavnogo upravleniya puti i
zheleznyeriy Ministerstva putey soobshcheniya.

KURZON, Ananiy Grigor'yevich, doktor tekhn.nauk, prof.; LITAVRIN, Oleg Grigor'yevich, inzh.; PETLOV, Yevgeniy Valerianovich, inzh.; POTYAYEV, Vyacheslav Andreyevich, kand. tekhn.nauk; KHOLOZYANTS, Aleksandr Georgiyevich, kand. tekhn. nauk; CHERTKOV, Aleksandr L'vovich, Laureat Leninskoy premii; YUTKEVICH, Kostislav Mikhaylovich, inzh.; MOISEYEV, A.A., doktor tekhn.nauk, prof., retsenzent; MASLOV, A.A., kand. tekhn. nauk, dots., retsenzent; ZAYTSEV, Yu.I., kand. tekhn. nauk, retsenzent; KOZHEVNIKOV, A.V., kand. tekhn.nauk, retsenzent; GITEL'MAN, A.I., inzh., retsenzent; SMILONOV, Yu.I., red.; TSAL, N.K., tekhn. red.

[Marine steam and gas turbines] Sudovye parovye i gazovye turbiny. Pod red. A.G.Kurzona. Leningrad, Sudpromgiz. Vol.2. [Systems and working principle of turbomachinery units] Sistemy i ustroistva turboagregatov. 1962. 419 p.

(MIRA 15:11)

(Marine turbines)

PETROV, YE. V.

PHASE I BOOK EXPLOITATION

SOV/6240

Kurzon, Ananiy Grigor'yevich, Oleg Grigor'yevich Litavrin, Yevgeniy Valerianovich Petrov, Vyacheslav Andreyevich Potyayev, Aleksandr Georgiyevich Khorozyants, Aleksandr L'vovich Chertkov, and Rostislav Mikhaylovich Yutkevich

Sudovyye parovyye i gazovyye turbiny. tom. 2: Sistemy i ustroystva turboagregatov (Marine Steam and Gas Turbines. v. 2: Systems and Devices of Turbine Units). Leningrad, Sudpromgiz, 1962. 419 p. Errata slip inserted. 5000 copies printed.

Ed. (Title page): A. G. Kurzon, Doctor of Technical Sciences, Professor; Reviewers: A. A. Moiseyev, Doctor of Technical Sciences, Professor, Yu. I. Zaytsev, Candidate of Technical Sciences, Docent, A. I. Gitel'man, Engineer, L. A. Maslov, Candidate of Technical Sciences, Docent, A. V. Kozhevnikov, Candidate of Technical Sciences; Ed.: Yu. I. Smirnov; Tech. Ed.: R. K. Tsal.

Card 1/4

Marine Steam and Gas Turbines (Cont.)

SOV/6240

PURPOSE: This book is intended for steam and gas-turbine designers, service personnel, technical, engineering, and scientific personnel, and for teachers and students in transportation and ship-building institutes.

COVERAGE: In this volume steam turbomachine systems and units and gas-turbine engines and installations are analyzed. No references are given.

TABLE OF CONTENTS [Abridged]:

PART I. SYSTEMS AND UNITS OF STEAM TURBOMACHINES

I. Systems for Regulation and Control	5
II. The Lubrication System	61
III. Systems of External Sealing, Preheating, Scavenging, Steam Removal From Valve-Rod Seals, and Cooling (Circulation) in Turbines	113

Card ~~2/4~~

PETROV, Ye.V.

New technology of making ceramic pipes. Stek. i ker. 17 no.10:
33-34 '60. (MIRA 13:10)
(Pipe, Clay)

PETROV, Ye.Yu.

Determination of retention stresses in the jamming of an icebreaker,
Probl. Arkt. i Antark. no.20:92-94 '65.

(MIRA 18:10)

REYNOV, Mikhail Naumovich; BREGMAN, Vladimir Il'ich; MOSKALENKO,
Vladimir Mikhaylovich; NAKHIMOVICH, Eduard Mikhaylovich;
PETROV, Yevgeniy Yuvenal'yevich; MOSENSKIY, Naum L'vovich;
AKSENOV, Yevgeniy Mikhaylovich; ROMANOV, B.N., inzh.,
retsenzent; SHAKHNOVA, V.M., red.; FRUMKIN, P.S., tekhn.red.

[Shipbuilding calculations on electronic computers] Sudostroitel'nye raschety na elektronnykh vychislitel'nykh mashinakh. [By] M.N.Keinov i dr. Leningrad, "Sudostroenie," 1964. 169 p. (MLA 17:3)

ИЗТЕОВ, Ю., канд. техн. наук

Optimum conditions for the movement of boats in shallow waters.
Tech. transp. 24 no.3.92.53-165. May 1975

SAVVIN, L., inzh. (Moldaviya); YEKHLAKOV, A., inzh. (Sverdlovsk);
TRUSOV, I., inzh. (Frunze); IVANOV, N.; PLAKSEYEV, G. (Kherson);
KNCROZ, M. (L'vov); GROZENKO, P., rabochiy (Novosibirsk);
TARASOV, O. (Novoressiyak); D'YAKOV, P., inzh. (Kamensk-
Shakhtinskiy); BUTUSOV, V., dotsent (Moskva); SUNDAKOV, M.,
inzh., student; PORTNOV, Ya., kand. tekhn. nauk (Makhachkala);
PETROV, Yu., inzhener-stroitel' (Ivanovo)

Readers argue, agree, advise. Tekh. mol. 31 no.6:6-9 '63.
(MIRA 16:7)

1. Starshiy inzhener Usol'skogo mashinostroitel'nogo zavoda
(for Ivanov). 2. Moskovskoye vyssheye tekhnicheskogo
uchilishche imeni Baumana (for Butusov). 3. Zaochnoye otdeleniye
fakul'teta zhurnalistiki Leningradskogo gosudarstvennogo
universiteta (for Sundakov).
(Technological innovations)

Petrov, Yu.

✓ Investigation of quality of steel coating obtained by
 plating. Yu. Petrov. *Avtosvedl* 29; No. 2, 81-4(1951).
 Twenty steel cathodes 5 mm. in diam. were plated in an
 FeCl₂ electrolyte bath by using 20 steel anodes in special
 ceramic diaphragms. Tensile strength and hardness de-
 creased with increase in FeCl₂·4H₂O concn. Reduction of
 temp. raised the hardness and the tensile strength. In-
 crease of cathode c.d. improved properties of Fe coatings.
 Max. c.d. with good mech. properties was given by $D_0 =$
 $0.04K$, where D_0 is cathode c.d. in amp./sq. dm. and K is
 concn. of FeCl₂ in g./l. Acidity ranged from 1.4 to 5.8
 g./l. with an optimum as calcd. by $N = 0.006K + 0.3$,
 where N is acidity of electrolyte in g./l. and K is concn. of
 FeCl₂ in g./l. To eliminate H₂ brilliancy, the plate was
 annealed at 300-300° for 1 1/2-2 hrs. For wider utility of
 plating it was attempted to obtain Fe plate with increased

✓
 [Handwritten signature/initials]

Yu. Petrov

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C content. Glycerol, sugar, and starch were tried. Glycerol did not markedly increase C content but gave an especially disperse structure with good mech. properties ($\sigma_t = 80-90 \text{ kg./sq. cm.}$, $H_B = 350-380$). A typical bath consisted of $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$ 400, glycerol 90, NaCl 150, and HCl 2.88 g./l.; $D_c = 20 \text{ amp./sq. dm.}$, $t = 90^\circ$. More than 35 g./l. sugar decreased properties, while 10-30 g./l. gave good properties with increase in hardness but C did not go above 0.25%. However, with sugar and glycerol coatings of bright surface and high hardness were obtained with C concn. controlled by sugar concn. in the electrolyte. A typical bath had $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$ 250-600, NaCl 100-180, glycerol 60-160, sugar 30-110, HCl 0.8-1.4 g./l.; $D_c = 10-20 \text{ amp./sq. dm.}$, $t = 70-90^\circ$. A special feature of these coatings permitted heat-treatment to give a microscopic stratification. The layers completely disappeared on heating above 700° , while at 900° a complete fusion of deposited layer with the base metal occurred. Quenching in oil from 100° gave C = 0.7% in the coating with a hardness of 477 Brinell. The structure of this layer consisted of martensite (acicular) and troostite. V. N. Bednarak

— PETROV, Yu.

Hidden potentialities for improving the utilization of working capital
in machinery manufacturing. Den. i kred. 20 no.7:16-20 J1 '62.

(MIRA 15:7)

(Moscow Province—Machinery industry—Finance)

PETROV, Yu.

Ways to raise the profit of machinery manufacturing enterprises near
Moscow. Fin.SSSR 23 no.5:43-47 My '62. (MIRA 15:5)
(Moscow Province—Machinery industry—Finance)

PETROV, Yu.

"Financial planning in industrial enterprises of a regional
economic council" by S.Rogovtsev. Reviewed by IU.Petrov.
Den. 1 kred. 18 no.12:85-87 D '60. (MIRA 13:11)
(Moscow Province--Industries) (Rogovtsev, S.)

PETROV, Yu.

How to prepare a payment calendar. Fin. SSSR. 22 no. 2:67-72
F '61. (MIRA 14:2)

1. Nachal'nik finansovogo otdela Upravleniya mashinostroyeniya
Mosoblsovnarkhoza.

(Payment)

PETROV, Yu.

Give economic incentive to stimulate the introduction of new technology. Fin.SSSR 20 no.9:43-46 S '59. (MIRA 12:12)

1. Nachal'nik finansovogo otdela Upravleniya mashinostroyeniya Mosoblsovnarkhoza.

(Moscow Province--Machinery industry--Suggestion systems)

PETROV, Yu.

For better utilization of working capital in the machinery industry.
Fin. SSSR 21 no.2:59-63 F '60. (MIRA 13:1)

1. Nachal'nik finansovogo otdela upravleniya mashinostroyeniya Moskovskogo oblastnogo sovnarkhoza.
(Moscow Province--Machinery industry--Finance)

PETROV, Yu.

Planning and organizing working capital in machinery construction.
Fin.SSSR 19 no.11:42-48 N '58. (MIRA 12:7)

1. Nachal'nik finansovogo otdela Upravleniya mashinostroyeniya
Mosoblsobnarkhoza.
(Machinery industry--Finance)

PETROV, Yu.

Fourth congress of the Union of Free German Trade Unions. Sov.
profsoiuzy 3 no.8:66-69 Ag'55. (MLRA 8:10)

(Germany, East--Trade unions--Congresses)

PETROV, Yu.

Hidden potentialities for speeding up the turnover of working capital in machinery manufacturing. Fin. SSSR 20 no.5:19-22 My '59. (MIRA 12:10)

1. Nachal'nik finansovogo otdela Upravleniya mashinostroyeniya Mos-oblsovnarkhoza.

(Moscow Province--Machinery industry--Finance)

PETROV, Yu.

New life of Bulgarian workers. Sov.profsoluzy 2 no.3:78-83

Mr '54.

(MLRA 7:2)

(Bulgaria--Labor and laboring classes)

(Labor and laboring classes--Bulgaria)

PETROV, Y. I., YEROSHENKO, V. M., and KOTULSKICH, V. P.

"Effect of electrical fields on convective heat-exchange."

Report presented at the 1st All-Union Conference on Heat- and Mass- Exchange,
Minsk, BSSR, 5-9 June 1961

VEL'SMAN, R.R., inzh.; PETROV, Yu. A., inzh.

Simultaneous docking of two ships in a floating dock in winter.
Sudostroenie 27 no.6:55-56 Je '61. (MIRA 14:6)
(Ships—Maintenance and repair)
(Docks—Cold weather operation)

MAKARENKO, P.P., inzh.; PETROV, Yu.A., inzh.

BPS-1 bunker train for loading rock without changing cars in drifting.
Gor. zhur. no.9:43-45 3 '61. (MIRA 16:7)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy
nikelevoy promyshlennosti, Leningrad.
(Mine railroads)

SOV/112-59-18-39359

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, Nr 18, p 183 (USSR)

AUTHORS: Matkhapov, P.N., Petrov, Yu.A.

TITLE: Circuit for the Series Connection of Commuting Devices in Powerful High-Voltage Generators of Square Pulses

PERIODICAL: Izv. Leningr. elektrotekhn. in-ta, 1958, Nr 35, pp 65 - 73

ABSTRACT: Two circuits of series connection of electronic and ionic commuting devices are given, which are used for the generation of powerful high-voltage square pulses. Such circuits are employed in those cases when the rated capacity and voltage of thyratrons and electronic modulation tubes are considerably lower than required. Making use of the principle of the well-known Arkad'yev - Marks multiplication circuit the authors improved it by introducing a special multi-winding choking coil, which resulted in a considerable constructional simplification of the circuit. The calculation formulae for the designing of the choking coil are given

K.V.B. ✓

Card 1/1

MATKHANOV, P. N., doktor tekhn. nauk, dotsent; PETROV, Yu. A., assistant

Calculation of the pulse-droop compensating networks of pulse
transformers. Izv. LETI 59 no.46:128-133 '62.
(MIRA 15:10)

(Pulse circuits) (Electric transformers)

ZAVALOVA, N.E. (Moskva); ZUKHAR', V.P. (Moskva); PETROV, Yu.A. (Moskva)

On the problem of hypnopedias. Vop. psikhol. 10 no.2:98-102
Mr-Ap '64. (MIRA 17:9)

PETROV, Yu A.

AID P - 4574

Subject : USSR/Aeronautics - training
Card 1/1 Pub. 135 - 9/23
Author : Petrov, Yu. A., Maj. of med. service
Title : Pilot's estimate of aircraft attitude in space
Periodical : Vest. vozd. flota, 2, 50-56, F 1956
Abstract : The author analyzes various previous articles of other authors on the subject of spatial orientation, which appeared in this periodical in 1955. He describes the results of various tests in instrument flying, which were carried out for checking the ability of pilots to estimate the attitude of aircraft in space. One table.
Institution : None
Submitted : No date

22028

S/177/61/000/001/004/010
D211/D306

27.635D

AUTHORS: Timofeyev, N.N., Colonel of Medical Services, Doctor of Medical Sciences and Petrov, Yu.A., Lieutenant-Colonel of Medical Services, Candidate of Medical Sciences

TITLE: On assessing flying abilities

PERIODICAL: Voenno-meditsinskiy zhurnal, no. 1, 1961, 30 - 34

TEXT: The authors give a short history of methods that have been used in the USSR for selecting men for the technical branches of the Armed Forces in general and for the Air Force in particular from 1923 onwards. The authors state that in view of recent tremendous technical progress in all the Armed Services, the task of recruiting committees in selecting the right men for a given service is becoming increasingly difficult. As existing selection methods are inadequate, the author believe that they should be complemented

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On assessing flying abilities

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by psychological investigations. The authors refer only to the selection of men for the Air Force, where conditions in modern aviation differ fundamentally from those in the other services. They cite the following investigators, who first used experimental psychological tests in the USSR: S.Ye. Mints, A.P. Nechayev, N.M. Dobrotvorskiy, K.K. Platonov. They then refer to investigations carried out during and after World War II in the USA and other foreign countries. Analyzing the working conditions on jet and supersonic aircraft, the authors think that only exceptionally gifted men are able to deal adequately with modern complicated instrument panels. However, as it is not possible to find enough individuals of this type, more attention should be paid to the more rational and simplified construction of instrument panels which would permit the pilot to interpret their showings correctly even if he is a man of average qualifications. It is also essential that pilots should be trained on ground installations, strictly simulating those used in flight; in such a way pilots could acquire the perception and

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On assessing flying abilities

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D211/D306

flying habits, needed in actual flying. Generally speaking problems of flying abilities should be solved with the aid of a psychological investigation of the whole personality of the candidates. There is 1 Soviet-bloc reference.

SUBMITTED: September, 1960

X

Card 3/3

21890

S/177/61/000/002/003/005
D234/D305

27 0000 also 1080

AUTHOR: Petrov, Yu.A., Lieutenant-Colonel of Medical Services,
Candidate of Medical Sciences

TITLE: Some aspects of applied experimental psychology

PERIODICAL: Voenno-meditsinskiy zhurnal, no. 2, 1961, 40 - 43

TEXT: This paper is a survey of psychological methods used in investigations related to military medicine. The role of habit formation in the rapid and correct evaluation of aerial photographs was studied by V.F. Rubakhin [Abstractor's note: No reference given]. Black-and-white photographs were used, and time at the disposal of the subject was not limited. Reports included the time spent on preliminary study of photographs, comments made by the subject, the sequence of work and names of auxiliary instruments used. Spatial orientation of pilots during instrument flight was studied in a series of experiments making use of the radio-reportage method. The first cockpit of a dual-control training plane was occupied by the

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Some aspects of applied ...

experimenter pilot, while the second cockpit, occupied by the subject, was completely covered by a special blind. Visual spatial orientation was completely eliminated and the subject had to rely only on instruments for information. Several predetermined flight tasks were carried out by the experimenter pilot, while the subject gave a running commentary on the position and evolutions of the plane by radio to a ground station where this was recorded on tape. The accuracy and time delay of this commentary can be assessed by comparing it with the actual flight task carried out, time being measured from the task-number announcements made by the experimenter pilot. This method can be used both for the evaluation of the cockpit equipment and for testing personnel in training. The attention-claiming properties of cockpit instruments and light signals were studied in another investigation. Artificial emergency situations were created with simulated instruments and signal lights during normal flight, and the time taken by the subject to react appropriately was measured. This method was used to determine the time intervals, during which the visual indicators appeared to be

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Some aspects of applied ...

ineffective, and to evaluate the conditions for correct and accurate perception of emergency signals and instrument readings. Reaction time experiments, based on the discoveries of the Pavlov school, were used to define typological properties of higher nervous activity. One of the problems investigated was the influence of external inhibition on motor reaction-time. Three kinds of experiments were used: (1) Motor response (key pressing) to white light stimulus, interfering auditory stimulus (bell). (2) Choice reaction-time (alternative keys for colored light stimuli) where the connections between stimuli and required responses is not known to the subject initially. (3) Choice reaction-time (as in (2)) with varying relationships between stimuli and correct responses. These experiments throw light on individual differences as to speed, reliability, plasticity, and other aspects of the underlying cortical processes. Tachistoscopic exposure of pictorial material can be used for testing attention. The fullness of the description given by the subject after short exposures in the Wundt or Nechayev type tachistoscope [Abstractor's note: Not described] gives a measure of atten-

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Some aspects of applied ...

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tion. A very efficient method of studying the activities of pilots, tank and car drivers is to take motion pictures of the subject's eyes (A.K. Abramov, A.M. Pospelov, V.A. Popov, K.K. Platonov). Subsequent decoding of this film facilitates the understanding of individual movements and actions in a complex pattern. Telemetric transmission of pulse rate measurements can be used easily to measure emotional tension in subjects remote from the experimenter. Memory can be investigated by the retention and reproduction of lists of unrelated words (5 to 15 or more). Modelling with electronic computers opens up new perspectives in experimental psychology. This method has all the advantages of the laboratory experiment while approximating maximally to the real processes. Another branch of psychological investigations which should not be neglected is the so-called natural experiment of A.F. Lazurskiy [Abstractor's note: Not described]. The purpose of these natural experiments is to observe the psychological processes in real-life situations. This method is of great importance in psychopathology and pedagogy. X

SUBMITTED: October, 1960

Card 4/4

PETROV, Yu.A., podpolkovnik meditsinskoy sluzhby, kand.med.nauk

"Aviation psychology" by K.K.Platonov. Reviewed by I.U.A.Petrov.
Voen.-med. zhur. no.6:88-91 Jo '61. (MIRA 14:8)
(AERONAUTICS--PSYCHOLOGY) (PLATONOV, K.K.)

ACC NR: AT6036618

SOURCE CODE: UR/0000/66/000/000/0306/0308

AUTHOR: Petrov, Yu. A.

ORG: none

TITLE: Methodology for psychophysiological investigations in outer space [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 306-308

TOPIC TAGS: space psychology, spatial orientation, man-machine system, psychologic stress

BT

ABSTRACT:

The space walk by A. Leonov was a necessary and important precursor to interplanetary flights. The assembly of orbital stations, repair work on external structures of spacecraft during prolonged spaceflight, activity on the lunar surface, and transfer from one spacecraft to another only partially represent the necessary activities of man in space. Doubtless it is necessary to investigate the psychological functions of man in space as an essential

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ACC NR: AT6036618

reliability factor both in the biological sense and relative to evaluating the man-machine system. For understandable reasons (spacesuit, limited contact, etc.), conditions in space do not permit the use of normal methods of psychological examination. The development of an optimum methodological approach to these ends is an important problem for psychologists working in the area of cosmonautics. The present study reviews some methods permitting the experimental evaluation of the dynamics of some changes and some human psychic functions which are to be expected under space conditions.

1. An Investigation of Spatial Orientation

During the experiment the subject must determine the direction of light under conditions of "fixation" of the coordinate axes and with few reference data to solve the given problem. For example: "the southwest is to your right and the position with respect to the axis of the body is inverted. Determine the direction of light in front of you". The correct answer is "northwest".

Results are rated according to accuracy and the duration of response. In the process of developing methods, a number of test series with various degrees of difficulty were examined. Instruction before the experiment

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ACC NR: A76036618

permits execution of commands and reception of answers in truncated form, which significantly increases the accuracy of evaluating the orientation of time. The truncated form of the example given above would be, "southwest; inverted".

2. An Investigation of the Formation and Reduction of Time Relationships

In this radio communication variant, the subject determines shifting relationships between geometric figures and their colors. The number of figures and of their colors ranges from three to five. The results are evaluated as a function of incorrect response, and the value of the latent period.

3. An Investigation of Attentiveness

In this radio test, text is transmitted from which the subject must keep track of a number of particular letters or their combinations.

4. An Investigation of Visual Estimation and the Coordination of Movements.

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ACC NR: AT6036618

Here, the subject must arrange plastic spheres into predetermined geometric figures. The time taken to complete the problem and the quality of completion is considered. The latter can be determined with the help of motion pictures or photography. This method cannot be used on Earth because weightlessness is a necessary prerequisite to its performance.

[N. A. No. 22; ATD Report 66-116]

SUB CODE: 05 / SUBM DATE: 00hy66

Card 4/4

ACC NR: AP7004338

SOURCE CODE: UR/0106/66/000/011/0046/0050

AUTHOR: Matkhanov, P. N.; Petrov, Yu. A.; Danilov, L. V.

ORG: none

TITLE: Synthesizing passive circuits intended for shaping pulses that have a bell-shaped envelope

SOURCE: Elektrosvyaz', no. 11, 1966, 46-50

TOPIC TAGS: pulse shape, pulse shaper

ABSTRACT: Synthesizing the reactive quadripoles is considered which produce, in a resistive load, a pulse with a bell-shaped envelope when a unit step voltage is applied to the quadripole input. The function $\sin t$ can be regarded as a zeroth approximation to the bell-shaped envelope; the function $\sin^2 t$, as a first approximation; the function $\sin^3 t$, a second approximation, etc. Then, the

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UDC: 621.374

ACC NR: AP7004338

corresponding pulses will be described by: where the pulse amplitude is unity-normalized, and the pulse duration is τ -normalized. An approximate formula for the transfer function of a physically realizable quadripole is derived, and its use is illustrated by two numerical examples.

$$\left. \begin{aligned}
 u_0(t) &= \begin{cases} \sin t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi; \end{cases} \\
 u_1(t) &= \begin{cases} \sin^2 t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi; \end{cases} \\
 u_2(t) &= \begin{cases} \sin^3 t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi. \end{cases}
 \end{aligned} \right\}$$

This important effect is noted: if a step voltage E is applied to the quadripole, the pulse height in the resistive load may reach a value of kE where $k \gg 1$ (in one of the numerical examples, $k = 10$). Such a high voltage gain permits using lower-voltage power-supply sources and switching devices. Passive shaping quadripoles are recommended when the ratio of pulse duration to carrier period does not exceed 20-30. Orig. art. has: 3 figures and 12 formulas.

SUB CODE: 09 / SUBM DATE: 29Nov65 / ORIG REF: 004

Card 2/2

ACC NR: AP7009052 (A, N) SOURCE CODE: UR/0413/67/000/003/0018/0018

INVENTOR: Abayev, B. I.; Mil'vidskiy, M. G.; Yeremeyev, V. V.; Mityukhin, E. F.;
Petrov, Yu. A.; Ofitserov, K. D.

ORG: None

TITLE: A device for growing single crystals. Class 12, No. 190864

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 18

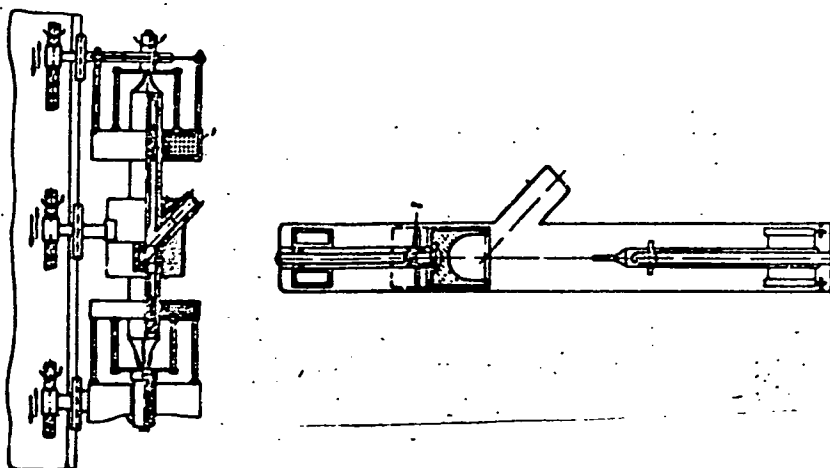
TOPIC TAGS: single crystal growing, quartz, electromagnet

ABSTRACT: This Author's Certificate introduces a device for growing single crystals of decomposable compounds by pulling from a melt in a crucible. The unit contains a quartz chamber of uniform diameter with inspection window and a hollow quartz rod for rotating and moving the seed. To rotate the crucible at a controllable rate and to control the rate of rotation and motion of the seed, the unit is equipped with stationary electromagnets consisting of water-cooled copper tubes and rotatable pole pieces. A quartz needle bearing is used for smooth rotation of the crucible containing the melt.

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UDC: 542.65:548.55

ACC NR: AP7009052



1—stationary electromagnet; 2—self-adjusting needle bearing

SUB CODE: 20/ SUBM DATE: 19Apr65

Card 2/2

PETROV, Yu.A.

Units for durability testing of materials under intermittent
static loads. Zav. lab. 31 no.11:1393-1395 '65. (MIRA 19:3)

... ..

bucket

... ..

PETROV, Yu.A.; LEBOV, Yu.A.

Experience in the use of ingot molds at the Chernopets metallurgical plant. Stall 15 no. 9:704-708 Ag 165. (1972 12:8)

1 9276-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/I/EWP(+)/EWP(k)/EWP(h)/EWP(z)/EWP(h)-
ACC NR: AP5027468 EWP(1) MJW/JD/EM SOURCE CODE: UR/0032/65/031/011/1593/1395

AUTHOR: Petrov, Yu. A.

ORG: none

TITLE: Apparatus for studying strength under repeated static loads

SOURCE: Zavodskaya laboratoriya, v. 31, no. 11, 1965, 1393-1395

TOPIC TAGS: test stand, metallurgic testing machine, static load test, cyclic test, tensile test, hydraulic device/ ¹⁴AMG 6 alloy, ¹⁸D16T alloy

ABSTRACT: This article presents unilateral and bilateral hydraulic devices for testing samples simultaneously along three sections at different or identical asymmetry of the stress variations with identical or different load frequencies. The bilateral machine consists of three frames with three individual loading mechanisms and a control panel. It is used for tensile and compressive testing. With asymmetric loading cycles, the maximum load is 10 000 kg, with symmetric, 5000 kg. The number of cycles can be varied from 1 to 30 per minute. The unilateral machine develops loads of constant sign. These machines have shown themselves to be reliable. The results (see Fig. 1) show that the spread of experimental points is negligible; therefore, the force-measuring and control devices ensure the required accuracy.

Card 1/2

UDC: 620.178.4/.6 : 1.05

I. 9276-66

ACC NR: AP5027468

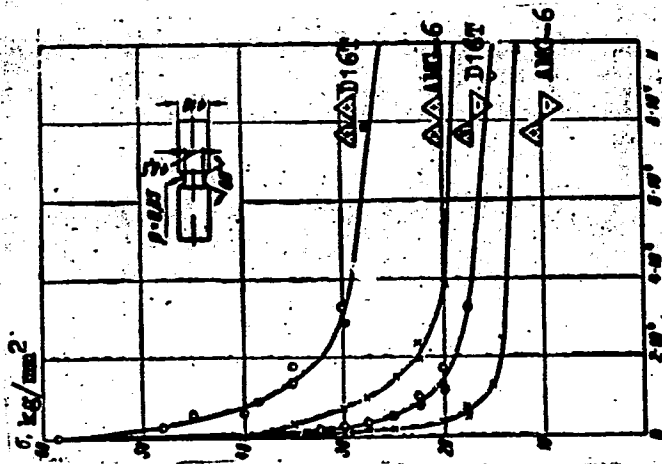


Fig. 1. Curves of static strength of alloys AMI-6 and D16T.

Orig. art. has: 2 diagrams and 1 graph.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 001

Card 2/2

KUROCHKIN, G.D., kand. geol.-mineral. nauk (Moskva); DEMENT'YEV, G.P.,
doktor biolog. nauk (Moskva); PETROV, Yu.A., kand. filosof. nauk;
FEDOROV, A.S. (Moskva); IL'IN, Ye.I. (Moskva); GALYUK, V.A. (Moskva);
NOVIK, I.B. (Moskva); SLUTSKIY, M.S. (Moskva); SHAFRANOVSKIY, I.I.,
prof.; FRANK-KAMENETSKIY, V.A., prof.

Book reviews. Priroda 54 no.9:60, 103, 111-116 S '65.

(MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet (for Petrov).
2. Leningradskiy gornyy institut im. Plekhanova (for Shafranovskiy).
3. Leningradskiy gosudarstvennyy universitet (for Frank-Kamenetskiy).

PETROV, Yu.B.

Work system without specific assignment in the "Proletarskaya-Glubokaya" mine. Ugol' Ukr. 6 no.9:31-32 S '62. (MIRA 15'4,

1. Nachal'nik otdela truda i normirovaniya shakhty "Proletarskaya-Glubokaya" Makeyevskogo tresta ugol'noy promyshlennosti Donbassa.
(Donets Basin—Coal mines and mining)
(Industrial management)

PETROV, Yu.D., kandidat ekonomicheskikh nauk.

Reserves for increasing railroad traffic capacity during track
work. Trudy MTBI no.5:53-64 '57. (MLRA 10:10)
(Railroads--Maintenance and repair)

PETROV, Yu.Ye.

~~Development of conceptacles in *Ascoseira mirabilis* Skottsb.~~
and the origin fucuses (Cyclosporeae). Bot. zhur. 48 no.9:
1298-1309 S '63. (MIRA 16:11)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR,
Leningrad.

ANDRIANOV, A. M., BAZILEVSKAYA, O. A., LUK'YANOV, S. Yu., OSOVETS, S. M., PETROV, Yu. F.,
PODGORNY, I. M. and YAVLINSKIY, N. A.

"Investigation of the Heating of Hydrogen Plasma in Small Toroidal Systems."
(Work carried out in 1951); pp. 42-65.

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

Available in Library.

OSOVETS, S. M., PETROV, Yu. F. and SCHEDRIN, N. I.

"Investigation of a Gas Discharge in a Uni-Connected Region." (Work - 1955):
pp. 242-263.

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

Available in Library.

PETROV, YU. V.

PART I MORE EXPLANATIONS 807/2021

International Conference on the Neutral Lines of Atomic Energy, 24, Geneva, 1958
Nuclear Physics (Moscow, Akademiya, 1959. 52 p. (Series for Study, Vol. 1)
8,000 copies printed.

Mr. (This page) A.I. Alibekov, Academician; V.I. Zakharov, Academician; and
S.A. Vlasov, Candidate of Physical and Mathematical Sciences; M. of this
Series; S.Z. Brezder and S.F. Zaslavsky, Candidates of Physical and Mathematical
Sciences; M. (Series book); O.L. Smolyan; Tech. Ed.: D.I. Masal.

NOTE: This collection of articles is intended for scientific research workers
and other persons interested in nuclear physics. The volume contains 43 papers
presented by Soviet scientists at the Second Conference on Neutral Lines of
Atomic Energy, held in Geneva in September 1958.

CONTENTS: It is divided into two parts. Part I contains 17 papers dealing with
plasma physics and controlled thermonuclear reactions, and Part II contains 26
papers on nuclear physics, including problems of particle acceleration and of
atomic energy. The first paper, presented by L.A. Arslanovich, presents a review of
Soviet work on controlled thermonuclear reactions. The remaining papers in
Part I deal with particular problems in this field.

The papers in Part II deal in detail with various problems in nuclear physics,
such as the reaction of heavy atoms and their isotopes, and with the study of
cosmic radiation by means of artificial earth satellites and rockets, described
in a paper by S.F. Vermer. The Russian-language edition of the proceedings of
the conference is published in 16 volumes. The first 6 volumes contain all the
papers presented by Soviet scientists as follows: Volume (1), Zakharov
films (Nuclear Physics); Volume (2), Zakharov's lecture; Volume (3), Zakharov's
(Nuclear Energy and Nuclear Power); Volume (4), Zakharov's lecture; Volume (5),
(Nuclear Fuel and Reactor Plants); Volume (6), Zakharov's lecture; Volume (7),
Zakharov's lecture; Volume (8), Zakharov's lecture; Volume (9), Zakharov's lecture;
Volume (10), Zakharov's lecture; Volume (11), Zakharov's lecture; Volume (12),
Zakharov's lecture; Volume (13), Zakharov's lecture; Volume (14), Zakharov's lecture;
Volume (15), Zakharov's lecture; Volume (16), Zakharov's lecture.

The other 10 volumes contain the articles of the other participants in the
conference. The Russian-language edition of the proceedings of the conference
has been published in the English and Russian languages. Editions of the proceed-
ings have been noted in these articles where the texts are not identical.
V.I. Zakharov, et al., "High Current Pulsed Discharge", Akhlyarov, et al.,
"High Frequency Plasma Oscillations", and Bogolyubov, "Investigations of the Many-
Body Problem". The serial numbers of reports 2502 and 2504 are reversed in the
English edition. Report 2511, by Simulov, et al., is numbered 2536 in the
English edition.

NAME OF CONTRIBUTOR

Reports of Soviet Scientists; Nuclear (Cont.) 807/2021

PART I PLASMA PHYSICS AND THE PROBLEM OF CONTROLLED
THERMONUCLEAR REACTIONS

Arslanovich, L.A. Controlled Fusion Research in the USSR (Report 2505) 5

Alibekov, A.M., O.A. Rastvorov, S.I. Baginskiy, D.O. Brezhev,
I.O. Korotkiy, I.M. Podgorniy, Yu.O. Prokhorov, E.Z. Filipov, I.I.
Pillipov, S. Zhobachevskiy, and V.A. Babakov. High Current Pulsed Dis-
charge (Report 2501) 31

Zakharov, V.I., Yu.Ye. Zhuravskiy, and S.S. Zhuravskiy. Development of a
Neutral Line in a Tokamak (Report 2503) 53
Participants mentioned include G.S. Aronov, D.S. Narbutov, O.S.
Maksharov, M.A. Leonovskiy, I.M. Gal'perin and S.P. Fedorovskiy.

Smolyan, O.L., Yu.F. Maslov, D.I. Pavlov, Yu.P. Petrov, and S.I.
Masal. Plasma Loop in a Tokamak (Report 2507) 65

Zakharov, V.I., S.A. Vlasov, V.S. Babakov, E.A. Maslov,
V.B. Furlov, M.F. Bepko, and S.A. Vasilovskiy. Investigations of the
Stability and Heating of Plasma in Toroidal Chambers (Report 2502)
and 2504 85

PETRZHAK, K.A.; NIKOL'SKAYA, Ye.B.; ~~PETROV, V.V.~~ SHLYAMIN, B.A.

Possibility of using a method involving the slowing down and collection of fission fragments of gas for the study of fragment isotopes. Part 1: Radiochemical study of the distribution of fragments from their paths. Radiokhimiia 1 no.2:227-230 '59.
(MIRA 12:8)

(Fission products)

21(8)

AUTHORS:

SOV/89-6-5-18/33

Bak, M. A., Bugorkov, S. S.,
Il'inskaya, T. A., Petrov, Yu. G., Petrzhak, K. A.,
Solntsev, V. M., Sorokina, A. V., Ushatskiy, V. N.

TITLE:

The Yield of Ru¹⁰³ and Ru¹⁰⁶ in the Fission of U²³⁵ and
Pu²³⁹ by Fast Neutrons (Vykhody Ru¹⁰³ i Ru¹⁰⁶ pri delenii
U²³⁵ i Pu²³⁹ bystryimi neytronami)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 5, pp 577-578 (USSR)

ABSTRACT:

The yields of Ru¹⁰³ and Ru¹⁰⁶ were determined by means of
a relative measurement with respect to the Mo⁹⁹-yield.
Uranium oxide (U²³⁵-enrichment >90 %) and plutonium oxide
were pressed in aluminum caskets. The latter were surrounded
by a 1 mm thick Cd-sheet, and the whole was packed in a
firmly closed aluminum cylinder. The cavities are filled
with boron carbide (all-round thickness at least 2 cm).
Two samples were made from uranium and 4 from plutonium,
and were irradiated for 52.2 hours in a water-filled beam
tube of the heavy-water reactor of the AN SSSR (AS USSR).
The neutron spectrum is characterized by the ratio

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The Yield of Ru¹⁰³ and Ru¹⁰⁶ in the Fission of
U²³⁵ and Pu²³⁹ by Fast Neutrons

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$E_n > 1.5 \text{ Mev} : E_n > 2.5 \text{ Mev} = 4.0 \pm 1.5$. From the irradiated samples Ru and Mo was chemically separated, after which thin β -preparations (thickness $< 20 \mu\text{g}/\text{cm}^2$) were produced on an organic foil; their activity was measured by means of a 4π -counter. An aluminum filter of $3 \text{ mg}/\text{cm}^2$ thickness is attached, so that only the β -rays of Ru¹⁰³ and Ru¹⁰⁶ reach the counter. Determination of the absolute activity of Ru¹⁰³ and Ru¹⁰⁶ was carried out by means of further filtering and recording the absorption curves of these radiating bodies with the same numbers. The momentum values measured make it possible, from 2 equations with 2 unknown ratios to calculate the latter. Herefrom it is possible to calculate the absolute fractions. From the latter and from the measured absolute Mo⁹⁹- β -activity (which will be dealt with by a publication in the near future) it was possible to calculate the following yields:

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The Yield of Ru¹⁰³ and Ru¹⁰⁶ in the Fission of
U²³⁵ and Pu²³⁹ by Fast Neutrons

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	Ru ¹⁰³	Ru ¹⁰⁶
Pu ²³⁹ (n,f)	5.7 ± 1.0 %	4.6 ± 0.8 %
U ²³⁵ (n,f)	3.2 ± 0.6 %	0.71 ± 0.12 %

There are 1 figure, 1 table, and 1 Soviet reference.

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SHIRYAYEVA, L.V.

[Yields of certain fragments in U^{235} , U^{238} , and Pu^{239} fission by neutrons] Vykhody nekotorykh oskol'kov pri delenii U^{235} , U^{238} i Pu^{239} neitronami delenia. Moskva, Glav. upr. po ispol'zovaniyu atomnoi energii, 1960. 14 p. (MIRA 17:2)

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AUTHORS:

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TITLE:

Range and Kinetic Energy Dispersion of U^{233} Fission Fragments

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1961
Vol. 38, No. 6, pp. 1723-1728

TEXT: The range distribution of the following U^{233} fission fragments in different gases was investigated: Sr ⁹¹⁻⁹², Y ⁹²⁻⁹³, Zr ⁹⁷, Ba ¹⁴⁰, and Ce ¹⁴⁴.
The uranium target was placed in a hermetically sealed aluminum cylinder. The container had 30 films each $\sim 6 \mu\text{g}/\text{cm}^2$ thick and separated from each other by 2.5 mm. The distance between the target and the first film was 136 mm. The container was filled with various gases (hydrogen, helium, nitrogen, air, neon, and argon). The thicknesses of the U^{233} target were 76, 110, 145, 228, and 284 $\mu\text{g}/\text{cm}^2$. The container was irradiated at constant temperature for 1-2 hours on the reactor of the AS USSR in a flux of $10^{12} \text{n}/\text{cm}^2 \text{sec}$. After the irradiation, the activity of each film was measured with an end-window beta counter. Sr, Y, Zr, Ba, and Ce were

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Range and Kinetic Energy Dispersion of U^{235}
Fission Fragments

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separated by the usual method of chemical analysis. The range distribution curves of the above-mentioned fission fragments in the various gases were obtained from the results of the radiochemical analysis; the average values of the range and the range dispersion were determined therefrom. For illustration, Fig. 2 shows the range distribution curve of the Ba^{140} nucleus in H_2 . The ordinate gives the relative activity of Ba^{140} in the various films, while the abscissa gives the fragment range at $P_{H_2} = 760$ mm Hg and $t = 15^\circ C$. The experimental distribution falls nearly on a Gaussian curve. Analogous results were obtained for the other fragments and gases. The scattering of the fragment ranges is assumed to be due to energy fluctuations of fragments caused by nuclear deformations, changes in kinetic energy as a result of fluctuation of the initial charge of the nucleus during fragment emission, statistical fluctuations of the electron number and the number of nuclear collisions during the slowing down of fragments in the gas, change of kinetic energy on emission of a neutron from a fragment, slowing down in the target material and, finally, to the geometry of the apparatus. A formula is given for determining the scattering S of the ranges. The

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Range and Kinetic Energy Dispersion of γ^{233}
Fission Fragments

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experimental values of the range and S are given in Table 1 after making allowance for absorption in the film and in the target material. Formulas are given also for the scattering of kinetic energy, and the data are collected in Table 2. The accuracy with which the ranges could be given was 2%; the error in range scattering on making allowance for all effects was found to be 10%. The data obtained for the scattering of kinetic energy agree well with American publications (Refs. 2-8). Ye. B. Nikol'skiy is thanked for help in the radiochemical analysis. There are 4 figures, 2 tables, and 10 references: 2 Soviet, 7 US, and 1 Danish.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

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Газ Gas	Sr ⁸⁷⁻⁸⁸		Y ⁸⁹⁻⁹⁰		Zr ⁹¹		Ba ¹³⁸		Ce ¹⁴⁰	
	R. cm	S. %	R. cm	S. %	R. cm	S. %	R. cm	S. %	R. cm	S. %
Водород H ₂	10,05	7,37	10,05	6,66	9,61	7,92	7,58	6,13	7,68	5,12
Гелий He	15,75	7,09	15,88	6,84	15,81	6,09	11,93	7,03	12,02	5,86
Азот N ₂	2,58	9,51	2,52	9,41	2,50	10,27	—	—	1,86	9,26
Воздух Air	2,54	8,04	2,51	7,61	2,44	8,20	1,85	9,87	1,84	8,71
Неон Ne	4,80	9,86	4,84	8,69	4,66	9,60	—	—	—	—
Аргон Ar	2,60	10,50	2,58	9,88	2,49	9,38	1,85	11,38	1,81	10,31

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