

LITVIN, F.L.; KONSTANTINOV, B.A.

Geometry of surfaces and the efficiency of threaded pairs with
rolling friction. Stan.1 instr. 33 no.7:15-17 J1 '62.
(MIRA 15:7)

(Screws)

KONSTANTINOV, B.A., inzh.; EPFEL'BAUM, R.V.; MAMET, A.P., doktor tekhn.nauk

Problem concerning the automation of water treating systems.
Teploenergetika 10 no.4:52-55 Ap '63. (MIRA 16:3)

1. Moskovskoye otdeleniye Tsentral'nogo kotloturbinnogo instituta.
(Feed-water purification)

KONSTANTINOV, B.A., kand.tekhn.nauk; PRINTSEV, A.A., inzh.

Work practices in supervising the operation of thermal systems. Prom.
energ. 17 no.8:1-3 Ag '62. (MIRA 16:4)
(Power engineering)

KONSTANTINOV, B.A., kand. tekhn. nauk

Voltage quality for industrial enterprises. Elektrichestvo no.5:
1-5 My '63. (MIRA 16:7)

1. Leningradskiy inzhenerno-ekonomicheskii institut.
(Electric power distribution)
(Electric power)

KONSTANTINOV, B.A.

Plenary session of a section of the Central Administration
of the Scientific and Technical Society of the Power Industry
on electric power supply to industrial enterprises. Prom.
energ. 18 no.3:56 Mr '63. (MIRA 16:6)

(Electric power distribution)

KONSTANTINOV, B.A.

Conference on electric lighting and power systems in the construction of industrial and residential buildings held in the German Democratic Republic. Prom. energ. 18 no.3:57
Mr '63. (MIRA 16:6)

(Germany, East—Electricity in building)
(Germany, East—Electric wiring)

KONSTANTINOV, B.A., kand. tekhn. nauk (Leningrad)

Use of mathematical methods in standardizing the electric power
consumption in industry. Elektrichestvo no.1:66-68 Ja '64.
(MIRA 17:6)

KONSTANTINOV, B.A.

Work practices of industrial enterprises in Leningrad on
effective use of electric power. Trudy IIEI no.41:260-
278 '62. (MIRA 17:6)

1. Leningradskiy Inzhenerno-ekonomicheskij institut.

AYZENBERG, B.I.; KONSTANTINOV, B.A.

Compensation of reactive power in industrial enterprises fed
by their own power plants and from the commercial power
distribution system. Trudy LIEI no.41:278-282 '62.
(MJRA 17:6)

1. Leningradskiy inzhenerno-ekonomicheskij institut.

KONSTANTINOV, B.A.

A book on electrical engineering and electrical equipment. A
general course under the editorship of Professor P.P. Iastrebov.
Prom.energ. 19 no.7:60 J1 '64. (MIRA 18:1)

PHASE I BOOK EXPLOITATION SOV/3527

Filippkin, A. T., K. V. Picheta, and B. A. Konstantinov

Mekhanizatsiya trudoyemkikh ruchnykh otdelochnykh operatsiy v mashinostroyeni
(Mechanization of Laborious Hand Finishing Operations in Machine Building)
Moscow, 1959. 62 p. 1,500 copies printed.

Sponsoring Agencies: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet, and
Akademiya nauk SSSR. Institut nauchnoy informatsii. Otdel nauchno-tekhnicheskoy
informatsii. Sektor mashinostroitel'noy promyshlennosti.

Tech. Ed.: E. Al'tshuler

PURPOSE: This booklet is intended for technical personnel working in the field of
machine part finishing.

COVERAGE: The authors describe briefly the techniques involved in the use of abrasive
belt, grinding and polishing, tumbling, hydroabrasive polishing, and power brushing.
These efficient methods are not widely used in the USSR because of shortage of
production of good abrasive belts. No personalities are mentioned. There are 9
references, 7 English, and 2 German.

Card 1/3

Mechanization of Laborious (Cont.)

SOV/3527

TABLE OF CONTENTS:

Introduction	3
Grinding and Polishing of Parts With Abrasive Belts	4
Methods of machining parts with abrasive belt	5
Machining regimes and sequence of operations	8
Manual polishing	10
Polishing parts which are mechanically fed	12
Importance of lubrication, coolants, and the grain size of belts in machining of parts	14
Design of belt-type grinders and polishing machines	22
Power Brushing of Parts	31
Designs of power-brushing machines	31
Selection of the type of brush	37
Hydroabrasive Polishing	45
Barrel Tumbling	48
Card 2/3	

KONSTANTINOV, B.A.

Efficient use of electric power in industry. Trudy LIEI
no.51:148-196 '64.

Conference held in Leipzig on problems of electrical
systems in industry and housing construction. Ibid.:277-281
(MIRA 18:11)

L 22593-66

ACC NR: AP6013000

SOURCE CODE: UR/0105/65/000/006/0091/0091

AUTHOR: Baidas, A. M.; Bol'shan, Ya. M.; Boroharinov, G. S.; Glasunov, A. A.; Zaleskiy, A. M.; Konstantinov, B. A.; Livshits, D. S.; Lychkovskiy, V. L.; Miller, G. R.; Petrov, I. I.; Pleskov, V. I.; Samover, M. L.; Syromyatnikov, I. A.; Chilikin, M. G.

ORG: none

TITLE: Professor Yu. L. Mukoseyev (on the occasion of his 60th birthday)

SOURCE: Elektrichestvo, no. 6, 1965, 91

TOPIC TAGS: scientific personnel, electric power production

ABSTRACT: Professor Yuriy Leonidovich Mukoseyev, 60, chairman of the department "Elektrosnabzheniye promyshlennykh predpriyatiy i gorodov (Electrical Supply of Industrial Enterprises and Cities)" of the Gor'kovskiy politekhnicheskii institut (Gor'kiy Polytechnic Institute) began his studies at the Gorkiy (Nizhegorod) University. After several years at the "Krasnoye Sormovo" plant he joined in 1935 the Glavelektromontazh system where in 27 years he advanced to the position of chief engineer of the Gorkiy section of the designing institute Elektroproyekt. In 1951 he published his book "Voprosy elektrosnabzheniya promyshlennykh predpriyatiy (Problems of Electrical Supply of Industrial Enterprises)"; in 1956 at the Moskovskiy energeti-

Card 1/2

UDC: 621.311

28
B

ACC NR: AP6013000

cheskiy institut (Moscow Power Institute) he defended his thesis "Distribution of Alternating Currents in Current Conductors". He became professor in 1960. From 1939 he has been continuously the vice-president of the Gorkiy board of the Scientific-Engineering Society of Power Engineers (NTU energotikov). Recently, Yu. L. Mukoseyev participated in the work of the Uchebno-metodicheskaya komissiya MV (Pedagogical-Methodological Commission of the Ministry of Armament) and of the SSO [?] USSR for the Electrical Supply of Industrial Enterprises and of Cities." Orig. art. has: 1 figure. [JPRS]

SUB CODE: 10 / SUBM DATE: none

Card 2/2 *llw*

L 27947-66

12

ACC NR: AF6017709

SOURCE CODE: UR/0105/66/000/001/0086/0086

AUTHOR: Avilov-Karnaikhov, B. N.; Bol'sham, Ya. M.; Venikov, V. A.; Volobriniski, S. D.; Yermilov, A. A.; Konstantinov, B. A.; Knyazevskiy, B. Ye.; Minin, G. P.; Miller, G. R.; Mukoseyev, Yu. L.; Petrov, I. I.; Serbinovskiy, G. V.; Syromyatnikov, I. A.; Fedorov, A. A.; Kholmiski, G. V.; Shagalov, A. S.; Chilikin, M. G.

ORG: none

37
B

TITLE: Prof. Georgiy Mikhaylovich Kayalov (on his 60th birthday)

SOURCE: Elektrichestvo, no. 1, 1966; 86

TOPIC TAGS: academic personnel, electric engineering personnel, electric equipment

ABSTRACT: In 1929, G. M. Kayalov completed the electrotechnical department of the Mechanical Faculty of the Novocherkassk Polytechnical Institute. Until 1947, he worked in the planning department of the Rostov Division of the All-Union Electrotechnical Union. In this time, he rose to the position of Chief Engineer. He directed the planning of a large number of important pieces of electrical equipment for various projects. He was active in the postwar restoration of many important industrial enterprises. He is the author of almost 70 published works, and has made a great contribution to modern, scientifically based methods of design and analysis of electrical loads for industrial equipment. He is on a number of commissions and in many scientific and technical societies. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUEM DATE: none

Card 1/1 BLG

UDC: 621.36

2

BAMDAS, A.M.; BOL'SHAM, Ya.M.; BORCHANINOV, G.S.; GLAZUNOV, A.A.; ZALESSKIY,
A.M.; KONSTANTINOV, B.A.; LIVSHITS, D.S.; LYCHKOVSKIY, V.L.; MILLER,
G.R.; PETROV, I.I.; PLESKOV, V.I.; SAMOVER, M.L.; SYROMYATNIKOV, I.A.;
CHILIKIN, M.G.

Professor IUrii; Leonidovich Makoseev; 1905, on his 60th birthday.
Elektrichestvo no.6:91 Je '65. (MIRA 18:7)

KONSTANTINOV, B.A.

Corrected transposition of the aorta and pulmonary artery; the clinical aspects, diagnosis and surgical treatment of associated defects. Grud. khir. 6 no.1:36-44 Ja-F '64.

(MIRA 18:11)

1. Otdeleniye vrozhdennykh porokov serdtsa (sav. - doktor med. nauk V.I. Burakovskiy) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov; nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR, Moskva. Adres avtorov: Moskva, V-49, Leninskiy prospekt, d.8, Institut serdechno-sosudistoy khirurgii. Submitted August 17, 1963.

AYZENBERG, B.L.; BOLOTOV, V.V. ; BRIL', R.Ya.; GERASIMOV, V.N.; GREKOV, V.I.;
DOVETOV, M.Sh.; KAMENSKIY, M.D.; KLEBANOV, L.D.; KONSTANTINOV, B.A.;
KUZ'MIN, V.G.; LYUBAVSKIY, V.I.; MELENT'YEV, L.A.; MIKHALEV, N.N.;
POLYANSKIY, V.A.; RAZDROGINA, L.A.; SIVAKOV, Ye.R.; STARIKOV, V.G.;
SAVASHINSKAYA, V.I.; SHAYOVICH, L.L.

Igor' Valentinovich Gofman, 1903-1963; obituary. Trudy LIEI
no.51:3-4 '64. (MIRA 18:11)

Konstantinov, B.A.

DOBROVA, M.B., kand.med.nauk (Moskva, K-9, Sobinovskiy per., d.6, kv.14);
KONSTANTINOV, B.A., student V kursa; KHIL'KIN, A.M., student V kursa

Experimental plastic surgery of the aorta with a polyvinyl alcohol
prosthesis. [with summary in English]. Vest.khir. 79 no.8:86-90
Ag '57. (MIRA 10:10)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav.
prof. V.V.Kovanov) 1-go Moskovskogo ordena Lenina meditsinskogo insti-
tuta im. I.M.Sechenova.

(AORTA, transpl.

polyvinyl sponge graft in dogs)

(VINYL COMPOUNDS

polyvinyl sponge graft in surg. of aorta in dogs)

DOBROVA, N.B., kand. med. nauk (Moskva, K-9, Sobinovskiy per. d.6, kv. 14)
KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Pronylaxis and treatment of cardiac complications in surgery of
the heart and large vessels under hypothermia. Vest. khir. 82 no.5:
90-94 My '59. (MIRA 12:7)

1. Iz kafedry operativnoy khirurgii (zav. - prof. V.V. Kovanov) 1-go
Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.
(HEART--SURGERY)

KOVANOV, V.V.; KONSTANTINOV, B.A.

Experimental studies on hypothermia, cavo-pulmonary anastomosis
and extracorporeal circulation in open heart surgery. Eksp.khir.
i anest. 6 no.1:12-18 '61. (MIRA 14:10)
(HEART—SURGERY) (HYPOTHERMIA)

KONSTANTINOV, B.A.

Cardiotomy of a "dry heart" and some problems of hemodynamics under hypothermal conditons; an experimental study. Trudy 1-go MMI 16:12-18'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(HEART-SURGERY) (BLOOD-CIRCULATION)
(HYPOTHERMIA)

KONSTANTINOV, B.A.; TUSHMALOVA, L.A.; TREKOVA, N.A.

Cardiotomy of the excluded right heart in cavapulmonary
anastomosis; an experimental study. Trudy 1-go MMI 16:19-24'62.
(MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy ana-
tomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov)
Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(HEART--SURGERY)

KONSTANTINOV, B.A.

Temporary substitution of the right and left heart by extra-corporeal blood circulation in cases of open cardiectomy; an experimental study. Trudy 1-go MMI 16:25-32'62.
(MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(HEART—SURGERY) (BLOOD—CIRCULATION, ARTIFICIAL)

DOEROVA, N.B.; KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Method of switching arteries and temporary clamping in surgery for the replacement of the aortal arch in an experiment. Trudy 1-go MMI 16:72-79'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo otdena Lenina meditsinskogo instituta.
(ARTERIES—SURGERY)

DOBROVA, N.B.; KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Experimental use of a cardiopulmonary preparation in surgery
for the replacement of the ascending aorta and the arch.
Trudy 1-go MMI 16:80-85'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy ana-
tomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov)
Pervogo Moskovskogo ordena Lenina
(AORTA--SURGERY) (SURGERY, PLASTIC)

DOBROVA, N.B.; KONSTANTINOV, B.A.

Extracorporeal blood circulation in the replacement of the ascending aorta and the aortic arch in an experiment; a preliminary report. Trudy 1-go MMI 16: 86-91'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(BLOOD--CIRCULATION, ARTIFICIAL) (AORTA--SURGERY)

YEVTEYEV, Yu.V.; KONSTANTINOV, B.A.; SYUY LE-TYAN' [Hsu-Le-t'ien]

Transposition of the aorta and pulmonary artery; clinical aspects, diagnosis, surgical treatment. Grund. khir. 5 no.4:3-12
Jl-Ag'63 (MIRA 17:1)

1. Iz otdeleniya vrozhdennykh porokov serdtsa (zav. - doktor meditsinskikh nauk V.I.Barakovskiy) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva V-49, Leninskiy prosp., d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.

BURAKOVSKIY, V.I.; KONSTANTINOV, B.A.

Materials on indications for surgical treatment of congenital heart defects in early childhood. Khirurgiia no.10:35-42 '64. (MIRA 18:8)

1. Otdaleniye vrozhdennykh porokov serdtsa (zav. - doktor med. nauk V.I.Burakovskiy) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

KONSTANTINOV, B.A., prof. (Leningrad); BELITSKIY, G.Yu., prof. (Leningrad);
NOVIKOV, G.Ye., inzh. (Yaroslavl'); SPEVAK, I.B., inzh. (Minsk);
KOZLOV, I.V., inzh. (Riga)

Study of the special features of electrical conductivity of the
human body. Elektrichestvo no.5:84 Ny '65.

(MIRA 18:6)

TSUKERMAN, G.I.; PETROSYAN, Yu.S.; LEVANT, A.D.; DANIELYAN, L.A.;
KOSTYUCHENOK, B.M.; TSYB, A.F.; KISIS, S.Ya.; GOLIKOV, G.T.;
POKROVSKIY, A.V ; BURAKOVSKIY, V.I.; KONSTANTINOV, B.A.;
LYUDE, M.N.; GCLJNZKO, R.R.

Proceedings of the meetings of the Surgical Society of Moscow
and Moscow region. Grud. khir. 6 no.6:114-117 N-D '64.

(MIRA 18:7)

1. Institut serdechno-sosudistoy khirurgii AMN SSSR (for all
except Kostyuchenok, Tsyb). 2. Institut khirurgii imeni A.V.
Vishnevskogo AMN SSSR (for Kostyuchenok, Tsyb).

KONSTANTINOV, B.A., doktor tekhn.nauk

Problems of the organization of the operation of electrical systems
in industrial enterprises. Prom. energ. 20 no.3:8-12 Mr '65.

(MIRA 18:6)

BIBANOV, V.I.; GONCHAROV, L.A.; KONSTANTINOV, B.B.; KRASNIKOV, N.D.;
TISHCHENKO, V.G.

Experimental study of the vibrations of massive concrete blocks
on sand bases. Trudy Inst. fiz. Zem. no.33. Vop. inzh. seism.
no.9:59-76 '64. (MIRA 17:12)

KONSTANTINOV B.D.
KOROLOV, A.M. [Korol'ov, O.M.]; KONSTANTINOV, B.D.

Elastic neutron scattering in a spherical scatterer [with summary
in English]. Ukr. fis. zhur. 2 no.4:303-309 O-D '57. (MIRA 11:3)

1. Institut fiziki AN URSS.
(Neutrons--Scattering)

SOV/58-59-12-26887

Translated from: Referativnyy zhurnal, Fizika, 1959, Nr 12, p 55 (USSR)

AUTHORS: Barchuk, I.F., Vertebnyy, V.P., Konstantinov, B.D., Nemets, O.F.,
Pasechnik, M.V.

TITLE: Spectra of Fast Neutrons Scattered From Atomic Nuclei

PERIODICAL: Tr. Sessii AS UkrSSR po mirn. ispol'zovaniyu atomn. energii.
Kiyev, AS UkrSSR, 1958, pp 94 - 101

ABSTRACT: The spectra of non-elastically scattered neutrons from the nuclei of Mg, Al, Fe, Ni, Zn, Cu, Sn, Cd, Hg, Pb and Bi were studied by means of ionization chambers, filled with hydrogen or methane, and a scintillation counter with an anthracene crystal. The D (d,n) He³ reaction served as the source of 2.8 Mev neutrons. The experimental data obtained from the ionization chambers were corrected for the "wall" and "induction" effects. The measurement results are given in graphs and tables. The authors point out that in heavy nuclei, with non-elastic

Card 1/2



85596

S/048/60/024/007/030/032/XX
B019/B056

24.45.
AUTHORS:

Konstantinov, B. D. and Ovcharenko, V. I.

TITLE:

β -Transitions in Weakly Deformed Nuclei

PERIODICAL:

¹⁹
Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 912-919

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. Using results obtained by A. M. Korolev (Ref. 5), the authors calculated the nuclear matrix elements. Korolev had derived wave functions and energy levels of odd nuclei, and calculated non-adiabatic terms and double-phonon states. The authors confine themselves to investigating the matrix elements of allowed and first forbidden β -transitions in non-relativistic approximation for a scalar and tensorial interaction of nucleons with an electron-neutrino field. They calculate the matrix elements of allowed and first forbidden β -transitions between nuclei consisting of a core of an even-even spherical nucleus and an external nucleon. The wave function of this system had already been given by

X

Card 1/3

85597

S/048/60/024/007/031/032/XX
B019/B056

24.4500

AUTHORS:

Gurin, Yu. L., Korolev, A. M., and Konstantinov, B. D.

TITLE:

The Magnetic and Quadrupole Moments of Weakly Deformed Nuclei

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 920-923

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. B. D. Konstantinov et al. (Ref. 2) derived the expressions for the magnetic and quadrupole moments for deformed nuclei. With respect to these nuclei it had been assumed that between the external nucleon and the nuclear surface an intermediate coupling existed. The nuclear radii were determined for the calculation of the moments by means of the formula

$R_0 = (1.27A^{1/3} + 0.6) \cdot 10^{-13}$ cm. The potential well depth V_0 was determined from the coupling energy of the last nucleon of an even-even nucleus. The energy of the first collective level of an even-even nucleus was determined from experimental data, and the coupling constant of the extranucleon with

Card 1/5

85597

The Magnetic and Quadrupole Moments of
Weakly Deformed Nuclei

S/048/60/024/007/031/032/XX
B019/B056

the nuclear surface was selected so that the calculated energy of the ground state agreed with the experimental values. Under these assumptions, the magnetic quadrupole moments were calculated for nuclei with an odd neutron number (Table 1), as well as for nuclei with an odd proton number. As may be seen, the generalized model, when applied to weakly deformed nuclei, gives better results than the shell model.

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Card 2/5

85597

The Magnetic and Quadrupole Moments of Weakly Deformed Nuclei

S/048/60/024/007/031/032/XX
B019/B056

Table 1: Magnetic and Quadrupole Moments of Nuclei With Odd Neutron Number

Таблица 1

Магнитные и квадрупольные моменты ядер, нечетных по нейтронам

Ядро	Z	N	A	Основное состояние	μ (п. м.) одночаст.	μ (п. м.) теорет.	μ (п. м.) эксперим.	Q, $\times 10^{-24}$ см ²	
								теорет.	эксперим.
1	2	3	4	5	6	7	8	9	10
Sr	38	49	87	$g_{7/2}$	-1,913	-1,077	-1,080 ± 0,3	1,273	0,850
Zr	40	51	91	$d_{5/2}$	-1,913	-1,560	-(1,9 ± 0,2)	-0,818	-0,460
Mo	42	53	95	$d_{5/2}$	-1,913	-0,998	-0,914	-0,819	0,510
Ba	56	79	135	$d_{5/2}$	1,149	0,520	0,835	-0,657	0,510
Ba	56	81	137	$d_{5/2}$	1,149	0,871	0,933	0,450	0,510
Ba	56	83	143	$f_{7/2}$	-1,913	-1,761	-(1,0 ± 0,2)	-1,355	-(1,1 ± 0,1)
Nd	60	85	145	$f_{7/2}$	-1,913	-1,042	-(0,69 ± 0,10)	-3,094	0
Nd	60	87	147	$p_{3/2}$	0,638	0,646	0,504	0	0
Hg	80	119	199	$p_{3/2}$	-1,913	-1,192	-0,559	-1,793	0,600
Hg	80	121	201	$p_{3/2}$	-1,913	-1,192	0,589	0	0
Pb	82	125	207	$p_{3/2}$	0,638	0,776	0,589	0	0

Card 3/5

85597

The Magnetic and Quadrupole Moments of Weakly Deformed Nuclei

S/048/60/024/007/031/032/XX
B019/B056

Table 2 : Magnetic and Quadrupole Moments of Nuclei With Odd Proton Number

Таблица 2

Магнитные и квадрупольные моменты ядер, нечетных по протонам

Ядро <i>i</i>	Z <i>z</i>	N <i>n</i>	A <i>a</i>	Описание состояния	μ (н. м.) эксперим.	μ (н. м.) теорет.	Q (н. м.) эксперим.	Q, e X 10 ⁻²⁸ см ²		
								одночаст.	теорет.	эксперим.
Co	27	32	59	<i>f</i> _{7/2}	5,793	4,730	4,648	0,08	+0,456	0,500 -(0,13±)
Cu	29	34	63	<i>p</i> _{7/2}	3,793	2,759	2,226	-0,06	-0,563	±0,01
In	49	66	115	<i>g</i> _{7/2}	6,793	5,355	5,500	0,15	+3,651	1,161
Sb	51	70	121	<i>d</i> _{7/2}	4,793	4,993	3,360	-0,13	-0,205	-(0,3±0,2)
Tl	81	122	203	<i>s</i> _{7/2}	2,793	1,778	1,612	0	0	0
Bi	83	126	209	<i>h</i> _{7/2}	2,623	1,824	4,082	-0,2	-0,994	-0,4

Card 4/5

KONSTANTINOV, B.D.

36841

S/185/62/007/006/004/014
D407/D301

24.6600

AUTHORS: Korol'ov, O.M., Konstantynov, B. D. and Ovcharenko,
V. I.

TITLE: Deuteron splitting under the action of nuclear forces

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 6, 1962,
602-616

TEXT: Deuteron splitting by nuclear forces is considered. It is assumed that in the splitting process the nucleus remains in the ground state, and that both the proton and the neutron interact with the nucleus. The analysis is based on perturbation theory; it applies to medium and not very light nuclei, whereas heavy nuclei are excluded from the consideration. The operator $H'(\vec{\rho}, r)$ represents the perturbation responsible for the deuteron splitting. H' is the sum of the potentials V_n , V_p and V_ρ ; $\vec{\rho}$ denotes the radius-vector of the relative motion of the nucleus and of the system neutron-proton. Formulas are derived for the wave functions $\psi_1(\rho)$.

Card 1/4.

Deuteron splitting under ...

S/185/62/007/006/004/014
D407/D301

E_d in the laboratory system ($E_d = E_0 \frac{A+2}{A}$). From the figure it is evident that with deuteron energies from 2.3 to 4.65 Mev, the total cross-section increases considerably with the energy, attaining a value of approximately 670 mbarn at $E_d = 4.65$. Such a high probability of deuteron splitting could be one of the reasons for the large deviation of the elastic scattering cross-section of deuterons (by medium and heavy nuclei) from the Rutherford cross-section at large scattering angles. Further, the angular distribution of neutron and protons at threshold energies is calculated. As before, the numerical calculations showed that in the energy range under consideration, the main contribution is given by terms with $n = 0$, $l = 1$, $m = 0$. Thereby the expression for the differential cross-section is considerably simplified. A figure shows the angular distribution of protons with respect to neutrons, for deuteron energies of 4 Mev. The angular distribution has a maximum at $\vartheta_p = 0$, with a half-width of 75° . Thus in the energy range under consideration the protons will mainly travel in a forward direction. There are 2 figures.

Card 3/4

Deuteron splitting under ...

S/185/62/007/006/004/014
D407/D301

ASSOCIATION: Instytut fizyki AN UkrRSR, Kyiv (Institute of Physics of the AS UkrRSR, Kiyev)

SUBMITTED: January 3, 1962

Card 4/4

AP4010287

S/0048/64/028/001/0033/0040

AUTHOR: Konstantinov, B.D.

TITLE: Inelastic scattering of neutrons by nuclei with two extra nucleons forming a pair in the ground state /Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev, 25 Jan to 2 Feb 1963/

SOURCE: AN SSSR, Izvestiya, Seriya fizicheskaya, v.28, no.1, 1964, 33-40

TOPIC TAGS:neutron scattering, inelastic scattering, odd nucleon, pairing energy, pairing interaction, two particle interaction, direct process

ABSTRACT: The paper presents a theoretical treatment of inelastic scattering of neutrons by even-even nuclei, taking into account pairing correlations. The treatment is based on a nuclear model in which the target nucleus is assumed to consist of an even-even core and an outer "core" that consists of two extra neutrons that form a pair in the singlet S state. The wave function chosen for describing the relative motion of the neutron pair is of the deuteron type, and the pairing energy of two neutrons is taken as the binding energy of the neutrons in the pair. It is further assumed that the direct two-particle interaction between the incident particle and the neutron pair occurs on the surface of the nucleus and is described

Card 1/3

AP4010287

by a Yukawa potential. The problem is treated in the Born approximation of perturbation theory, where the sole reason for transition from the initial state to the final excited state is assumed to be direct two-particle interaction. On the basis of these assumptions, there are calculated the matrix elements of the transition and the values of the total and differential cross sections for the process of inelastic scattering of the neutron with excitation of the extra nucleon pair. Also calculated is the differential cross section for the case when the nucleon pair breaks up. The results of the calculations indicate that the formulas for the differential cross sections for inelastic scattering of neutrons in the case of excitation of the nucleon pair in the nucleus and in the case of break up of the pair are qualitatively different as regards the behavior of the angular distribution. It is noted that in considering the excitation of the nucleus as excitation of the nucleon pair in a potential well one can, from the deduced angular distributions, which are a function of the angular momentum transferred by the neutron to the nucleus, infer significant data on the energy levels of even-even nuclei. "In conclusion, the author expresses his deep gratitude to A.M. Korolev for suggesting the topic and constant interest in the work." Orig. art. has: 41 formulas.

Card 2/3

AP4010287

ASSOCIATION: Institut fiziki Akademii nauk SSSR (Institute of Physics, Academy of Sciences, SSSR)

SUBMITTED: 00

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: NS

NR REF SOV: 002

OTHER: 006

Card 3/3

KONSTANTINOV, B.D.

Probabilities of electromagnetic transitions between excited states
of odd nuclei. Izv. AN SSSR. Ser. fiz. 29 no.7:1217-1226 J1 '65.

(MIRA 18:7)

1. Institut fiziki AN UkrSSR.

KONSTANTINOV, B.K.

AID P - 3694

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 21/22

Authors : Viktorov, I. V., Maj. and B. K. Konstantinov, Capt.

Title : Special features of training pilot interceptors (according to the foreign press)

Periodical : Vest. vozd. flota, ³⁸1, 92-94, Ja 1956

Abstract : Several articles of American periodicals are briefly reviewed. General aspects of training pilot interceptors are given. Several American fighter aircraft are mentioned.

Institution : None

Submitted : No date

AUTHOR: Konstantinov, B.L., Engineer (Bulgaria, Sofia) 105-58-5-6/28

TITLE: On the Problem of an Approximate Solution of the Oscillation Equations for the Synchronous Machine (K voprosu o priblizhennom analiticheskom reshenii uravneniya kachaniy sinkhronnoy mashiny)

PERIODICAL: Elektrichestvo, 1958, Nr 5, pp. 24-26 (USSR)

ABSTRACT: If a synchronous generator operates on rails with invariable voltage, the differential equation for the rotor motion in the case of a modified mode of operation of the generator and with some

simplifications is $M \frac{d^2 \delta}{dt^2} = P_0 - P_m \frac{\sin \delta}{\delta}$ M denotes the inertia (1)

constant of the machine, δ - the angle between the vectors of the longitudinal EMF of the generator and the voltage of the system, P_0 - power output of the primary motor, P_m - the maximum value power characteristic in the case of a new mode of operation. In order to explain the character of rotor motion (oscillation or continuous acceleration) the function:

Card 1/3

$$y = \delta - \delta_0 - \frac{P_m}{P_0} (\cos \delta_0 - \cos \delta) \quad (3)$$

On the Problem of an Approximate Solution of the
Oscillation Equations for the Synchronous Machine

105-58-5-6/28

must be investigated. The investigation of the first and second derivation of the function (3) as well as of the equation $y = 0$ (Kepler equation of the type $\delta = p \sin \delta + a$) shows that in the presence of a second radical the condition:

$\frac{P_m}{P_o} > 1$ must be satisfied. As, however, this condition is connected

with the initial angle δ_o , it cannot be considered to be a criterion (for the determination of the character of rotor motion). In order to find an approximate criterion establishing the connection between the values P_o , δ_o and P_m , it is necessary to make use of the condition for the conservation of stability based upon the principle of a comparison of surfaces. Here the formula (6) is derived as a criterion for the conservation of stability:

$\frac{P_m}{P_o} > \frac{1}{1 - \left(\frac{1}{2} - \frac{\delta_o}{\pi}\right)^2}$. Next, the approximated solution of the

equation (4) in the domain $0 \leq \delta \leq \pi$ is obtained. Equation (7). The latter is solved with respect to δ , and the equation (8) is

Card 2/3

On the Problem of an Approximate Solution of the
Oscillation Equations for the Synchronous Machine

105-58-5-6/28

obtained, from which the initial interval of the oscillation

$$\delta_0 \leq \delta \leq \frac{\pi}{4} \frac{P_o}{P_m} - \delta_0$$

is immediately ascertained as also the "half-period" of this interval T.

The formula (9) for the utmost time t for switching off short circuits is derived. Finally, the solution of two concrete problems by means of the formulae (7) and (9) is described. For reasons of comparison also the results obtained by the successive intervals are given. - In conclusion it is pointed out that formula (9) can also be used in the case of the parallel operation of two stations with commensurable power outputs with the same limits for the modification of the angle δ . There are 1 figure, 1 table, and 3 references, which are Soviet.

SUBMITTED: February 5, 1957

AVAILABLE: Library of Congress

Card 3/3

1. Generators--Mathematical analysis 2. Rotors--Motion--Mathematical analysis 3. Rotors--Oscillation--Mathematical analysis 4. Approximate computation--Applications

sov/86-58-11-15/37

AUTHOR: Konstantinov, B.M., Col

TITLE: Piloting a Turboprop Aircraft (Pilotirovaniye turbovintovogo samoleta)

PERIODICAL: Vestnik vordushnogo flota, 1958, ⁴Nr 11, pp 47-52 (USSR)

ABSTRACT: The article describes in detail the technique of piloting the Il-18 aircraft. The Il-18, equipped with four turboprop engines, has a number of peculiarities when compared with aircraft equipped with piston or turbojet engines. The takeoff can be made from both a paved and an unpaved runway. During the takeoff run, the takeoff direction is held, first, with the use of brakes and later with the increase of speed, with the aid of the rudder. The aircraft becomes airborne at a speed of 200-225 km/hr. In the air the aircraft is stable and easy to control at altitudes up to 6000 m. At higher than 6000 m altitudes some deformation in the aircraft structure takes place as a result of a considerable difference in temperature drop in the pressurized cabin and in the unpressurized tail part of the fuselage. As a result of such deformation the right pedal is moved forward and both ailerons are lifted upward. Under such conditions the pilot, when making a turn, for instance, has the feeling that the ailerons are somewhat overbalanced and therefore, at high altitudes and in turbulent air in particular, he has to

Card 1/2

KONSTANTINOV, B. P.

Graphite in lubricating automobile engines and chassis units.
Avt. transp. 34 no.6:38 Je '56. (MLRA 9:9)

(Great Britain--Automobiles--Lubrication)

RCPDS 11/11/1958, 511

AUTHOR: Al'perovich, A.G. and Konstantinov, B.P. 113-58-6-2/16

TITLE: Fuel Economy Road Trials for Automobile (O dorozhnykh ispytaniyakh avtomobilya na toplivnyyu ekonomichnost')

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 6, p 5-6 (USSR)

ABSTRACT: The method used in England to determine the fuel economy of automobiles is described by the authors. They find this method superior to the method used in the Soviet Union, which is prescribed by GOST 6875-54. They recommend that the English method be used in the Union by adding road trials on shingle and dirt roads.
There are 2 tables and 1 non-Soviet reference.

ASSOCIATION: NAMI

Card 1/1 1. Automobiles--Operation 2. Fuel--Economic aspects

KONSTANTINOV, B.; SHIPKIN, V.

Plans for transporting gas from the Sahara to Western Europe.
Gaz. prom. 4 no.7:51-52 J1 '59. (MIRA 12:10)
(Gas, Natural--Transportation)

BASOV, A.N.; KONSTANTINOV, B.P.; MYAGKOV, V.S.; TRAKTOVENKO, I.A.

Economic effect diesel fuel quality improvement. Khim.i tekhn.topl.i
masel 6 no.6:1-11 Je '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Diesel fuel)

40920

S/230/62/000/010/001/001
D036/D114

12.6000.

AUTHOR: Konstantinov, B.P., Engineer

TITLE: A technology for sinking and injecting a cylindrical ferro-concrete sheet pile

PERIODICAL: Transportnoye stroitel'stvo, no. 10, 1962, 46-48

TEXT: A technique is described for sinking and injecting a cylindrical ferroconcrete sheet pile designed by TsNIIS ("Transportnoye stroitel'stvo", no. 6, 1962, 26). Ten 6-m-long sections (making up 5 x 12-m-piles) each with an external diameter of 1.55-m and weighing 95 t were sunk in sandy soil with the following characteristics: angle of natural slope of the dry sand - 34-37°; of the wet sand - 31-33°; volumetric weight of the sand - 1.49-1.60 g/cm³. The experimental sinking was carried out in 4 stages. In the first stage, the piles were sunk to a depth of 3 m by jetting with four needles with 20 mm nozzles. In the second stage, the piles were sunk to 6 m by БП-3 (VP-3) and БП-160 (VP-160) vibration rams. The hydraulically-loosened soil was removed from the pile by a 120-mm-diameter air lift. In the third and fourth stages, the second sections were joined to the first, and the piles sunk to 10-11 m by a VP-160 ram, with jetting and air-lifting.

Card 1/3

A technology for sinking and injecting ...

S/230/62/000/010/001/001
D036/D114

It was found that the sections must be joined by welding if a vibration ram is used. During the sinking process, the air and water needles were systematically moved around the perimeter of the pile. To avoid damage to the cut-offs, the sheet-pile wall must be assembled within the length of the travelling piling frame. The crane should be correctly placed relative to the wall, and be high enough to set up the planned number of sections. The piles should be slung, and lowered strictly vertically. Examination of the test piles at a depth of 7.3 m revealed no damage to the cut-offs. The cut-offs should be kept free of soil by air or water jets, and the resulting spaces below the cut-offs should be filled with mortar, sand or gravel. The injection mortar was selected on the basis of laboratory experiments, and experimental injection of the cut-offs performed in earth, in air, in water and air, and in water. In the water medium, the free space of the groove was filled by the underwater method, whereby the mortar was fed continuously into a metal tube so as to always fill the tube up to the top and not come into contact with the water when running out. Injection in air or earth can also be done by the above method or else by pouring in the mortar directly from the mixer. On the basis of the test, the cylindrical sheet

Card 2/3

Card 3/3

KONSTANTINOV, B.P., inzh.

Efficient design of the catches on a cylindrical reinforced
concrete sheet pile. Transp. stroi. 12 no.6:26-29 Je '62.

(MIRA 15:6)

(Sheet piling)

~~KONSTANTINOV~~, B.P., inzh.

Techniques of sinking and grouting cylindrical reinforced
concrete sheet piling. Transp.stroi. 12 no.10:46-48 0 '62.
(MIRA 15:12)

(Sheet piling)

IPATOV, M.I.; TOBIAS, D.A., kand. tekhn.nauk, retsenzent;
KONSTANTINOV, B.P., inzh., red.; PETUKHOVA, G.N., red.
[REDACTED], F.P., tekhn. red.

[Technical and economic evaluation of motor-vehicle elements
in designing; motortrucks] Tekhniko-ekonomicheskaja otsenka
konstruktsii avtomobilei pri proektirovanii; gruzovye avto-
mobili. Moskva, Mashgiz, 1963. 186 p. (MIRA 16:9)
(Motortrucks--Design and construction)

143025-66 FRD/EWT(l)/EWP(e)/EWP(m)/ERG(k)-2/EWP(j)/T/EWP(t)/ETI/EWP(k)

ACC NR: AP6030009 IJP(c) WG/JD/WW/JW/ SOURCE CODE UR/0020/66/169/005/1041/1043
JG/FM/VH

AUTHOR: Ashkinadze, B. M.; Vladimirov, V. I.; Likhachev, V. A.; Ryvkin, S. M.;
Salmanov, V. M.; Yaroshetskiy, I. D.; Konstantinov, B. P. (Academician)

77
76
B

ORG: Physicotechnical Institute im. I. F. Ioffe, Academy of Sciences SSSR (Fiziko-
tekhnicheskiy institut Akademii nauk SSSR)

TITLE: Laser induced damage in transparent dielectrics

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1041-1043

TOPIC TAGS: laser induced damage, material damage, glass, dielectric, alkali halide,
crystal

ABSTRACT: Damage induced by standard and giant-pulse lasers in a broad class of
materials (alkali halide single crystals, polymers, glasses) was investigated
experimentally. Plane cracks were observed in poly(methyl methacrylate) (PMMA) under
standard-pulse radiation at a 45° angle with respect to the laser beam axis and at
random with respect to the crack rotation plane around the same axis. A large
number of isolated cracks was observed at superthreshold energies. A 20-j beam
focused at f = 6 cm caused tail-end damage in glasses. The same pulse caused total
destruction along the cleavage planes in alkali-halide crystals at energies slightly
above threshold. In each instance, damage was observed when a giant-pulse beam was
focused on the inside of specimens. In single crystals the damage occurred along

Card 1/2

UDC: 535.89:537.226.004.74

L 43025-66

ACC NR: AP6030009

all three cleavage planes; in the case of PMK it had the form of an extended cone consisting of small individual cracks (of the order of 0.1—0.5 mm); in glasses, filiform damage appeared sharply with the thickening at the focus. To explain the damage mechanism and kinetics, the effects of pulse energy, focus position, temperature, and the focal length on the nature and extent of the damaged region were investigated. The experimental data indicate a strong dependence of the nature and extent of damage on the test material and the operating (peak or total energy) conditions. The damage in each spot occurred independently and was caused by beams of a small critical density. The most probable damage mechanism is thought to be the coherent hypersonic phonons generated as the result of stimulated Brillouin scattering. The thermal explosion accompanying damage due to hypersonic phonons in the case of strong optical absorption is suggested as a secondary mechanism. The experiments showed that the thermal explosion occurred basically near the focus and that its role varied with materials and energy density. Crack formation occurred during a period not exceeding the pulse duration (for giant pulse laser 10^{-9} sec), the damage taking place first at the focus and traveling backwards. Damage induced by powerful laser beams can be used as a method of comparing the bulk and surface strength of a material. Orig. art. has: 2 figures and 1 formula. [YK]

SUB CODE: 20/ SUBM DATE: 24 NOV 65/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 5065

Card 2/2

KONSTANTINOV, Bl.P.

Anthracotic phthisis of the lymph nodes with perforation into the trachea and esophagus. Suvrem med., Sofia no.6:83-87 '60.

1. Iz Katedrata po obshta patologija i patologichan anatomia ISUL
(Rukov. na katedrata: prof. Iv.Goranov)
(TUBERCULOSIS LYMPH NODE case reports)

KONSTANTINOV, Boris Pavlovich

SA

53
H

4648. Absorption of Sound at Solid Boundaries. B. Konstantinov, *J. Techn. Phys. U.S.S.R.* 9, 9, pp. 226-228, 1939.—The author calculates the absorption of sound at a plane solid boundary, taking into account the thermal conductivity and viscosity of the medium by means of Kirchhoff's classical results. D. S.

Sci Res Inst. Musical Industry

ASAC 55A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

SA KONSTANTINOV, B. P. B 69

190. The damping of sound in a room with solid walls and the diffraction coefficient of sound absorption. B. KONSTANTINOV. *J. Techn. Phys. U.S.S.R.*, 8, pp. 424-432, 1939. *In Russian.*— On the basis of the usual statistical theory of architectural acoustics the formulae of the "diffuse" coefficient of sound absorption of a rigid boundary and the time of reverberation of the "most resounding" room are deduced; the results of a previous research on the absorption of reflected sound waves by hard walls are used. Numerical values of the diffuse coefficient of absorption in air under room conditions are compared with those contained in tables of the absorption coefficient of brick and concrete walls, the surface of water in basins and the data for smooth metallic walls given in a paper of Kundsen's. F. B. K.

*Sci Res Inst. Musical Industry
Leningrad*

METALLURGICAL LITERATURE CLASSIFICATION

113

*Noises & Audio
Frequencies*

841. On Propeller Noise. I. Ya. Gutin, B. P. Konstantinov. *Journ. of Tech. Phys.* (in Russian), No. 77, Vol. 14, 1942, pp. 26-32, p. 261.

The first paper is a further development of a theory of propeller noise proposed by the author in 1936 (1961 of 1960). A brief survey of the papers on the subject published in the intervening years is given and some of the criticisms of the author's theory are answered. In the second paper a few remarks are made on Gutin's paper. It is stated that attempts to obtain a general solution of the equation determining the noise field of a rotating propeller are futile, and reference is made to another approximate method which, it is claimed, is more logical and accurate than the one proposed by Gutin.

KONSTANTINOV, B.P.

IOFFE, A.F.; LEBEDEV, A.A.; FOK, V.A.; STARIK, I.Ye.; KONSTANTINOV, B.P.;
DZHELEPOV, B.S.; PERFILOV, N.A.; DOBRETISOV, L.N.; STARODUBTSEV, A.V.;
NEMILOV, Yu.A.; ZHDANOV, A.P.; MURIN, A.N.; AGLINTSEV, K.K.; TSARE-
VA, T.V.; SHUL'MAN, A.R.; YEREMEYEV, M.A.

P.I.Lukirskii; obituary. Vest.AN SSSR 24 no.12:62 D '54.(MIRA 8:1)
(Lukirskii, Petr Ivanovich, 1894-1954)

~~Fictitious method of measurement of the expansion coefficients of crystals. H. P. Konstantinov and A. V. Ruskina. Zh. fiz. tverd. tel. 1953, 31, 108, 456-460 (1953). The authors used for the determination of the expansion coefficients accurate results obtained by other authors. A method was explored of using the method of measuring the coeff. of crystals based on the measurement of the change between the d of the crystal and the length of the specimen itself as an example of the method. The results obtained are shown. The method is applicable to crystals which are uniform, and in which neither the crystal axes are equal. The method was used for the determination of the expansion coefficients of quartz.~~

AUTHORS: Konstantinov, B. P., Yefremova, Z. N., SOV/57-58-8-22/37
Ryskin, G. Ya.

TITLE: Expansion Coefficient Measurements of NaCl, LiF, KCl, and KBr
by the Flotation Method (Izmereniye koeffitsiyentov rasshäreniya
NaCl, LiF, KCl, KBr flotatsionnym metodom)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 8, pp 1740 - 1747 (USSR)

ABSTRACT: In this paper a detailed description is presented of the
technique of measuring the expansion coefficients of salt
crystals according to the flotation method. The application
of floaters for the determination of the temperature coefficient
of the density β of a fluid is suggested. This method is
based upon the measurement of the temperature difference of
the flotation of two floaters kept in the fluid to be inves-
tigated and in a control fluid, the β of which is known.
The room temperature expansion coefficients γ_k of NaCl, KCl,
KBr, LiF were measured. The reproducibility of the measurements
is as high as 0.5 - 1%. This is in accordance with the
estimation of the accuracy of this method presented by
Konstantinov and Ryskin in reference 1. The measured values

Card 1/2

Card 2/2

VITMAN, F.F., prof., doktor fiz.-mat.nauk, otv.red.; IOFFE, A.F., akademik, red.; KURDYUMOV, G.V., akademik, red.; ZHURKOV, S.E., red.; KONSTANTINOV, B.P., red.; GLIKMAN, L.A., prof., doktor tekhn. nauk, red.; ZLATIN, N.A., doktor fiz.-mat.nauk, red.; STEPANOV, V.A., doktor tekhn.nauk, red.; FRIDMAN, Ya.B., prof., doktor tekhn.nauk, red.; IOFFE, B.S., kand.tekhn.nauk, red.; AVER'YANOV, V.I., red.isd-va; PEVNER, R.S., tekhn.red.

[Some problems on the strength of solid bodies; collection of articles dedicated to the 80th birthday of N.N.Davidenko, member of the Academy of Sciences of the Ukrainian S.S.R.] Nekotorye problemy prochnosti tverdogo tela: sbornik statei, posviashchennyi vos'midesiatiletiu akademika AN USSR N.N.Davidenkova. Moskva, 1959. 386 p. (MIRA 12:6)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Zhurkov, Konstantinov).
(Strength of materials)

KONSTANTINOV, B.P.; BAYKOV, Yu.M.; RYSKIN, G.Ya.

Flotation method for measuring compression coefficients of solids
and liquids. Fis. tver. tela 1 no.6:963-969 Je '59.
(MIRA 12:10)

1.Leningradskiy fiziko-tehnicheskii institut AN SSSR.
(Compressibility)

KONSTANTINOV, B.R.; DEBORIN, A.M., akademik; PEYVE, Ya.V.; IOFFE, A.F.,
akademik; MIKHAYLOV, A.I., prof.; SATPAYEV, K.I., akademik;
ZHUKOV, Ye.M., akademik; LAVRENT'YEV, M.A., akademik; SEMENOV, N.N.,
akademik; PAVLOVSKIY, Ye.N., akademik; MINTS, I.I., akademik;
SISAKYAN, N.M.; ROMASHKIN, P.S.; FEDOROV, Ye.K.; STECHKIN, B.S.,
akademik; MAYSKIY, I.M., akademik; PAVLOV, Todor, akademik;
AREUZOV, A.Ye., akademik; VASIL'YEV, N.V., doktor ekon.nauk;
BELOUSOV, V.V.; MITIN, M.B., akademik; BLAGONRAVOV, A.A., akademik;
KANTOROVICH, L.V.; RYBAKOV, B.A., akademik; NEMCHINOV, V.S., akademik
Discussion of the address. Vest. AN SSSR 29 no.4:34-63 Ap '59.
(MIRA 12:5)

1.Chlen-korrespondent AN SSSR (for Konstantinov, Peyve, Sisakyan,
Romashkin, Fedorov, Belousov, Kantorovich).
(Science)

S/186/60/002/001/007/022
A057/A129

AUTHORS: Konstantinov, B.P.; Kiselev, B.P.; Skrebtsov, G.P.

TITLE: Separation of radium and barium in the exchange between amalgam and solution

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 44 - 49

TEXT: In the present investigation the separation of radium from barium by means of ion exchange between barium amalgam and solution containing radium and barium salts was studied and the separation factor α was determined. Various methods concerning the separation of Ra and Ba have been already published. The statements given by N.B. Miller and V.A. Pleskov [Ref. 9: Tr. soveshch. po elektrokhimii (Proceedings of the Conference of Electrochemistry), 165, Izd. AN SSSR (Ed. AS USSR)] on the kinetics of the ion exchange with different amalgam electrodes, and the values obtained for the exchange current have to be verified in connection with the effect of mixing (especially of the mercury phase) on ion exchange kinetics. The present experiments were carried out in an exchange cell containing a mixer in the form of an Archimedian screw. The duration of experiments varied from 1 to 25 min. At the end of the experiment radium was determined

Card 1/3

S/186/60/002/001/008/022
A057/A129

AUTHORS: Konstantinov, B.P.; Kiselev, B.P.; Skrebtsov, G.P.

TITLE: Electrolytic separation of radium and barium with a mercury electrode

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 50 - 56

TEXT: In the present paper the effect of current density, temperature, and anion concentration in the solution on the separation factor α of radium and barium in electrolysis on a mercury cathode was investigated. The prevalent method for radium and barium separation is fractional crystallization developed by M. Curie. The present investigations were carried out in a glass electrolyzer varying the ratio between radium and barium from 10^{-7} to 10^{-10} %. In the discussion concerning the dependence of the separation factor on current density a theoretical consideration by B.P. Konstantinov is presented. The separation effect on the mercury cathode is controlled by processes occurring in the diffusion layer, i.e., in a thin layer on the boundary with the mercury surface. The flowing is laminar in this layer and its thickness depends on hydrodynamic conditions. Konstantinov derives an equation for the determination of the change in the concen-

Card 1/3

BRESLER, S.Ye.; YEGOROV, A.I.; KONSTANTINOV, B.P.

Theory and practice of continuous chromatography. Izv. AN SSSR.
Otd. khim. nauk no.11:1938-1947 N '60. (MIRA 13:11)

1. Fiziko-tekhnicheskij institut AN SSSR i Leningradskiy politekhnicheskij institut im.M.I.Kalinina.
(Chromatographic analysis)

24-7700 (1035, 1043, 1143)

S/181/60/002/011/006/042
B006/B056

AUTHORS: Konstantinov, B. P. and Badenko, L. A.

TITLE: Investigation of the Behavior of Indium and Antimony
Impurities in Germanium by the Method of Electrodiffusion

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 11, pp. 2696 - 2702

TEXT: The authors investigated the transport of indium and antimony impurities (electrodiffusion) induced by the application of direct current to a germanium sample with a view to studying the general rules of this process; besides, the possibility of using electrodiffusion for introducing and distributing impurities in germanium was studied. In the course of the experiment, impurities were introduced locally into the crystal, and their distribution by direct current was investigated by the method of contact radiography. In¹¹⁴ and Sb¹²⁴ were used as tracer atoms. Radiographic plates of the type MP (MR) and an X-ray film were used. The pictures obtained were photometrically recorded by a microphotometer of the type MF-2 (MF-2). The specimens (single crystals of germanium) had an initial resistivity of 20 ohm:cm. After introduction of
Card 1/4

86422

Investigation of the Behavior of Indium and
Antimony Impurities in Germanium by the
Method of Electrodiffusion

S/181/60/002/011/006/042
B006/B056

the impurities, the specimens were heated at 700°C for 4 - 6 hours, and the specimens, which were then found to be faultless, were examined in a vacuum chamber (Fig.1) at 10⁻²mm Hg. Fig.2 shows the results of a photometric evaluation of the initial and the final distribution obtained from one of the experiments with n-type Sb. Fig.3 shows the concentration distribution of n-type Sb in a specimen after three experiments with different current directions. From the rate at which the frontal maximum was shifted, the carrier mobility was determined. Numerical results are contained in a table. Finally, special experiments on the temperature dependence of the mobility of impurities are described. The experiments were carried out within the ranges from 300-600°C and 800-900°C. According to temperature, the current density varied from 200 to 350 a/cm² at a field strength of 0.4 - 0.8 v/cm. ✓

Card 2/4

86422

Investigation of the Behavior of Indium and Antimony Impurities in Germanium by the Method of Electrodifffusion

S/181/60/002/011/006/042
B006/B056

Type of initial material	Impurity	Temperature, °C	Mobility, cm ² /v.sec	Direction of transport
n-type	Sb	500	$(1.6 \pm 0.2) \cdot 10^{-6}$ $(4 \pm 0.5) \cdot 10^{-6}$ $(4.2 \pm 0.5) \cdot 10^{-6}$	Cathode
p-type	Sb	580		
n-type	Sb	600		
n-type	Sb	800	$(1.2 \pm 0.2) \cdot 10^{-5}$ $(1.4 \pm 0.2) \cdot 10^{-5}$ $(2.4 \pm 0.3) \cdot 10^{-5}$ $(3.7 \pm 0.5) \cdot 10^{-5}$	Anode
p-type	Sb	800		
n-type	Sb	850		
p-type	Sb	900		
n-type	In	300	$(1.5 \pm 0.2) \cdot 10^{-7}$ $(5.3 \pm 0.5) \cdot 10^{-7}$ $(3.6 \pm 0.5) \cdot 10^{-6}$	Anode
n-type	In	450		
n-type	In	550		
p-type	In	800	$(9.8 \pm 1.3) \cdot 10^{-6}$ $(1.3 \pm 0.2) \cdot 10^{-5}$ $(5.0 \pm 0.6) \cdot 10^{-5}$	Cathode
n-type	In	820		
p-type	In	900		

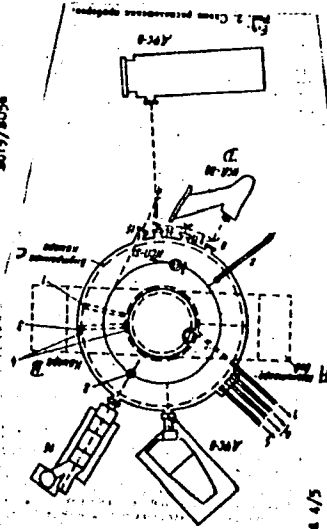
Card 3/4

ANISIMOV, A.I.; VINDGRADOV, N.I.; GOLANT, V.Ye.; KONSTANTINOV, B.P.

Method for investigating the spatial distribution of electrons in plasma.
Zhur. tekhn. fiz. no.9:1009-1018 S '60. (MIRA 13:11)

1. Fiziko-tekhnicheskiy institut AN SSSR, Leningrad.
(Electrons) (Plasma (Ionized gases))

BTLSU
2/05/40/030/012/001/011
2017/0036



Card 4/5

Legend to Fig. 2: 2) Rogovsky grid; 3) Coil for measuring the magnetic flux passing through the cross section; 4) Coil for measuring the magnetic flux between the two chambers; 5) 6) and 7) are emitters of millimeter and centimeter waves; 8) Instrument for studying the atomic flux; 9) Magnetic conductor; 10) Chamber; 11) Inner chamber.

Card 5/5

S/062/60/000/011/004/016
B013/B078

AUTHORS: Bresler, S. Ye., Yegorov, A. I., Konstantinov, B. P.
TITLE: Theory and Practice of Continuous Chromatography
PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 11, pp. 1938 - 1947

TEXT: The possibility has been examined of performing chromatography as a continuous process. This would be extremely favorable for the large-scale partition of mixtures. The simplest solution of this problem seems to be the creation of apparatus on the basis of extraction columns, i.e., with a counterflow of ionite powder and solution. To prevent the longitudinal intermixing of the liquid, which would be inevitable in this case and would impair the creation of the highest possible number of partition steps, it is suggested here that the counterflow of the solid sorbent be replaced by a counterflow of the vessels filled with the solid sorbent. The suitability of such a solution was proved by Spedding, Powell, and Svec (Ref.1). A system with a counterflow of the vessels (Fig.1) consists of a set of columns with ionite. The zone of

Card 1/4

Theory and Practice of Continuous Chromatography

S/062/60/000/011/004/016
B013/B078

the mixture to be separated is situated in one of these columns. Under the action of the displacing ionic current, the mixture zone is shifted into the next section, from this again into the next, etc. If the displacing and the ions are properly selected, it can be shifted as far as desired, without thereby losing their size or shape. The mixture components, in this connection, concentrate at both ends of the zone. Once the equilibrium distribution of the components is stabilized, the periodic taking of partition products is started. This takes place at the moment when the mixture zone changes over from one section into the other. The problem of the distribution of mixture components was solved for the case of a stationary zone by S. Ye. Bresler (Ref.2). An analysis was made of the operation of a chromatographic partition system for the case $\xi \ll 1$, and the distribution of the components in the zone under continuous displacement was determined from a differential equation. With a view to demonstrate the possibilities of continuous chromatography, an investigation was made of the partition of alkali metals on the CEC (SBS) cationite. A laboratory system was worked out (Fig.3) in which there was practically no space left between the individual sections. Equimolecular $\text{Na}^+ - \text{Li}^+$ and $\text{K}^+ - \text{Na}^+$ mixtures were examined.

Card 2/4

Theory and Practice of Continuous Chromatography

S/001/00/001/001/001/001
B013/B078

The main characteristics of chromatographic displacement were the following: length of the mixture zone $L = 40$ cm; total length of the column of sorbent - 150 cm; rate of shift of the mixture zone in the column $v = 0.002 - 0.01$ cm/sec; salt concentration of the displacing solution $c_0 = 0.5$ N; "volume capacity" of the sorbent 1.5 g-equiv./ml; $\alpha c_0/m_0 = 0.25$ (α - volume of the distance between the grains of sorbent; m_0 - exchange capacity of displacing solution). It was possible to establish the stabilization of the distribution of elements in the zone by recording the change in electrical conductivity in various sections. It was found that the concentration starts changing at the ends of the zone. This disturbance propagates toward the center of the zone. After a distance of 1.5 m the stationary interface between the ions of the mixture stabilizes. In the experiments, pure lithium acetate was placed at the front end of the zone, and pure sodium acetate at the rear end. Similar results were obtained for $K^+ - Na^+$. Thus, continuous partition can be used for obtaining high-purity alkali-metal salts. G. V. Samsonov is mentioned. There are 5 figures and 4 references: 3 Soviet and 1 US.

Card 3/4

Theory and Practice of Continuous Chromato-
graphy

S/062/60/000/011/004/016
B013/B078

.ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR
(Physicotechnical Institute of the Academy of Sciences
USSR). Leningradskiy politekhnicheskiy institut im.
M. I. Kalinina (Leningrad Polytechnic Institute imeni
M. I. Kalinin)

SUBMITTED: June 22, 1959

Card 4/4

9.9845
26.2311

87461
S/057/60/030/012/008/011
B019/B056

AUTHORS: Anoshkin, V. A., Golant, V. Ye., ~~Konstantinov, B. P.~~,
Poloskin, B. P., and Shcherbinin, O. N.

TITLE: Microwave Studies of Plasma With "Al'fa" Research
Installation

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 12,
pp. 1447 - 1455

TEXT: The authors studied plasma in the research installation "Al'fa" with 3-cm and 8-mm waves. Fig.1 shows a block diagram of the measuring arrangement. The studies were carried out at a voltage of 10 and 15 kv at the discharge capacitors (capacity 4600 microfarads), field strengths of the longitudinal field of 180, 360, 540, and 720 oe, and pressures of the hydrogen atmosphere of $2 \cdot 10^{-3}$, 10^{-3} , and $2 \cdot 10^{-4}$ mm Hg. The results concerning the reflection and the passage of radiowaves through plasma were discussed in detail on the basis of oscillograms and diagrams. From the results obtained by the experiments described, the

Card 1/5

87461

Microwave Studies of Plasma With "Al'fa"
Research Installation

S/057/60/030/012/008/011
B019/B056

authors conclude that the collective motion of plasma has a complex character. The plasma effects irregular vibrations with frequencies not exceeding 10^5 cps. It first occurs near the chamber with a concentration of 10^{12} cm^{-3} , and later more in the interior. Under the conditions investigated, no continuous production of plasma over the entire cross section was observed. It was further found that near the chamber wall there exists a region, in which the electron concentration exceeds the original concentration ($4 \cdot 10^{12}$ cm^{-3}). At pressures of more than 10^{-3} mm Hg and at certain values of the magnetic longitudinal field the breakup of plasma has an ordered character. The breakup has a duration of about 0.5 to 2 microseconds. There are 10 figures and 5 Soviet references. X

Card 2/5

87461

Microwave Studies of Plasma With "Al'fa"
Research Installation

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B019/B056

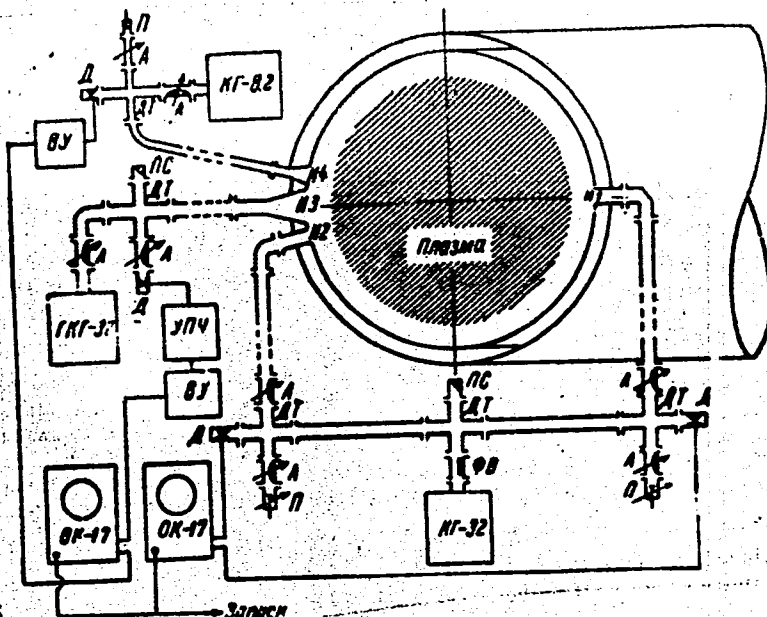
ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Institute of
Physics and Technology of the AS USSR). Nauchno-
issledovatel'skiy institut elektrofizicheskoy apparatury
(Scientific Research Institute of Electrophysical
Apparatus)

SUBMITTED: July 15, 1960

Card 3/5

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B019/B056.

X



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Card 4/5

Sangch

KONSTANTINOV, B.P., akademik; KOTOVA, L.V.

Role of lengthwise mixing in exchange columns in isotope separation. Dokl. AN SSSR 135 no.4:896-898 '60. (MIRA 13:11)

1. Fiziko-tekhnicheskiy institut Akademii nauk SSSR.
(Isotope separation)

41533
S/080/62/035/009/001/014
D202/D307

11.4/100

AUTHORS: Konstantinov, B.P., and Alimova, I.A.

TITLE: The amalgam exchange of K and Na

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 9, 1962,
1908 - 1916

TEXT: The present work is the first of a series of studies concerned with the separation of alkali and alkaline earth metals by the amalgam exchange method. The exchange of K and Na between amalgams and aqueous solutions of hydroxides were carried out, in the range -7 to 60°C. The concentrations of the Na, K amalgams were varied between 0.08 and 1.5 N and those of the aqueous KOH, NaOH phases to be a function of temperature and of the concentrations in the two phases, passing through a value of 1, but not exceeding 4.1 (the ratio α was generally calculated to be greater than 1). The equilibrium constant of the exchange reaction in the same system was measured as 1.93 ± 0.01 at 21°C, and the heat of reaction was calculated from its temperature dependence as -3600 cal/mole. The ratios
Card 1/2

S/080/62/035/009/001/014
D202/D307

The amalgam exchange of K and Na

of the activity coefficients of Na and K were measured in the two phases in dependence on the concentrations of the two components. The exchange current density was of the order of tens of Ka/m^2 and increased linearly with increasing rate of stirring. It is concluded that effective Na-K separations are feasible by the above method, using a multistage process. There are 10 figures and 2 tables.

SUBMITTED: June 15, 1961

KONSTANTINOV, B.P.; ALIMOVA, I.A.

Amalgam exchange between Li - K, Li - Na, and Li - Ca. Zhur.
prikl.khim. 35 no.10:2266-2271 0 '62. (MIRA 15:12)
(Amalgams)

KONSTANTINOV, B.P.; TROSHIL, V.P.

Measurement of the transport number of ions relative to the solution.
Zhur.prikl.khim. 35 no.11:2420-2426 N '62. (MIRA 15:12)
(Ions—Migration and velocity) (Solution (Chemistry))

KONSTANTINOV, B.P.; KAYMAKOV, Ye.A.

Measuring transfer numbers in aqueous CuCl_2 solutions, using the method of concurrent observation on the motion of ions and of the solution. Zhur. fiz. khim. 36 no.4:842-845 Ap '62. (MIRA 15:6)

1. Fiziko-tekhnicheskiy institut.
(Mass transfer) (Copper chloride) (Ions)

KONSTANTINOV, B.P.; KAYMAKOV, Ye.A.; VARSHAVSKAYA, N.L.

Use of the Kohlrausch law in determining the transport numbers
in solutions of highly concentrated electrolytes. Zhur.fiz.khim.
36 no.5:1028-1034 My '62. (MIRA 15:8)
(Electrolyte solutions) (Ions--Migration and velocity)

KONSTANTINOV, B.P.; KAYMAKOV, Ye.A.; VARSHAVSKAYA, N.L.

Use of the Kohlrausch law for determining the transport numbers
in solutions of CuCl_2 , CoCl_2 , ZnCl_2 , and CdCl_2 . Zhur.fiz.khim.
36 no.5:1034-1037 My '62. (MIRA 15:8)

1. Fiziko-tekhnicheskii institut, Leningrad.
(Ions--Migration and velocity) (Chlorides)

KONSTANTINOV, B.P.; RYSKIN, G.Ya.; RYLOV, V.S.

Rate of element exchange between lithium amalgam and KCl
aqueous solution. Zhur.fiz.khim. 36 no.8:1639-1645 Ag '62.
(MIRA 15:8)

1. Leningradskiy fiziko-tehnicheskiy institut, AN SSSR.
(Amalgams) (Potassium chloride) (Electrochemistry)

S/056/62/042/002/005/055
B102/B138

AUTHORS: Dragnev, T. N., Konstantinov, B. P.

TITLE: Energy and angular distributions of protons from the
 $\text{Ca}^{40} (\gamma, p) \text{K}^{39}$ reaction with $E_{\gamma\text{max}} = 22 \text{ Mev}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
no. 2, 1962, 344 - 348

TEXT: The authors continue previous studies (DAN SSSR, 126, 1234, 1959) in which they discovered a fine structure in the proton energy distribution of $\text{Ca}^{40} (\gamma, p) \text{K}^{39}$ reactions. The experiments were carried out with the bremsstrahlung of the synchrotron at the Fiziko-tehnicheskiy institut AN SSSR (Physicotechnical Institute AS USSR). НИКФИ-Я2 (NIKFI-Ya2) nuclear emulsions were used for the proton distribution measurements. The experimental arrangement (Fig. 1) provided for high accuracy ($\sim 1.5\%$) and easy evaluation of the results. The apparatus for measuring the doses was designed by S. P. Kruglov. Background was less than 1% for protons of more

Card 1/3

Energy and angular ...

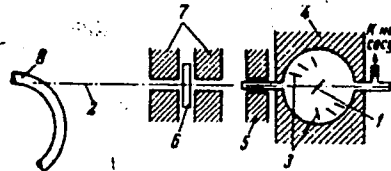
S/056/62/042/002/005/055
B102/B138

Elliott, B. H. Flowers. Proc. Roy. Soc., A242, 57, 1957; J. Rotblatt. Nature, 165, 387, 1950; R. R. Wilson. Nucl. Inst. 1, 101, 1957; M. Morita et al. Progr. Theor. Phys. 12, 713, 1954.

ASSOCIATION: Fizicheskiy institut Bolgarskoy Akademii nauk g. Sofiya
(Physics Institute of Bulgarian Academy of Sciences, Sofia)

SUBMITTED: July 13, 1961

Legend to Fig. 1: (1) Target, (2) gamma ray, (3) emulsion plates, (4) lead shield, (5) pole pieces, (6) monitor, (7) lead collimator, (8) synchrotron.



Card 3/3