"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, Il'ya Iosifovich; KOPYLOVA, A.N., red.; YERMAKOVA, Ye.A., tekhn.red.

[Geometry of the classical regions and the theory of automorphic functions] Geometriia klassicheskikh oblastei i teoriia avtomorfnykh funktsii. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1961. 191 p. (MIRA 14:6)

(Topology) (Functions, Automorphic)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

Classification of limited homogeneous spaces in n-dimensional complex space. Dokl. AN SSSR 141 no.2:316-319 N '61. (MIRA 14:11)

1. Predstavleno akademikom M.V.Keldyshem.
(Complexes) (Lie algebras)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY -SHAPIRO, I. I.

"Generalized upper half planes in the theory of functions of several complex variables"
To be presented at ehe IMU International Congress of Mathematicians 1962 - Stockholm, Sweden, 15-22 Aug 62

Mathematics Insti. imeni V. A. Steklov, Acad. of Sci. USSR (1961 position)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

Bounded homogeneous regions in n-dimensional complex space.
Izv. AN SSSR. Ser. mat. 26 no.1:107-124 Ja-F '62. (MIRA 15:2)
(Lie algebras)(Spaces,Generalized)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

Structure of j-algebras. Izv. AN SSSR. Ser. mat. 26 no.3: 453-484 My-Je '62. (MIRA 15:6)

(Lie algebras)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.

Unitary representations in a G/Γ space where G is a group of n-order real matrices and Γ is a subgroup of integer matrices. Dokl. AN SSSR 147 no.2:275-2[illegible] N '62. (MIRA 15:11)

1. Chlen-korrespondent AN SSSR (for Gel'fand).
(Groups, Theory of)
(Matrices)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.

Unitary representations in homogeneous spaces with discrete stationary groups. Dokl. AN SSSR 147 no.1:17-20 N '62. (MIRA 15:11)

1. Chlen-korrespondent AN SSSR (for Gel'fand).
(Groups, Theory of)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

VINBERG, E.B.; GINDIKIN, S.G.; PYATETSKIY-SHAPIRO, I.I.

Classification and canonic realization of complex homogeneous bounded regions. Trudy Mosk. mat. ob-va 12:359-388 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.

Automorphic functions and the theory of representations. Trudy Mosk. mat. ob-va 12:389-412 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.; ZHELANKINA, T.S.; KEYLIS-BOROK, V.I.; PAVLOVA, L.G.; REZNYAKOVSKIY, P.T.

Use of electronic computers in locating earthquake epicenters. Dokl. AN SSSR 151 no.2:323-325 Jl '63. (MIRA 16:7)

1. Institut fiziki Zemli im. O.Yu.Shmidta AN SSSR. Predstavleno akademikom Ye.K.Fedorovym.
(Electronic computers) (Seismometry)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.; TSETLIN, M.L.

Certain classes of games and robot games. Dokl. AN SSSR 152 no.4:845-848 O '63. (MIRA 16:11)

1. Chlen-korrespondent AN SSSR (for Gel'fand).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.; FEDOROV, Yu.G.

Determining the structure of a crystal by the nonlocal search method. Dokl. AN SSSR 152 no.5:1045-1048 O '63. (MIRA 16:12)

1. Chlen-korrespondent AN SSSR (for Gel'fand).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GEL'FAND, I. M.; GRAYEV, M. I.; PYATETSKIY-SHAPIRO, I.I.

Representations of adele groups. Dokl. AN SSSR 156 no. 3:487-490 '64. (MIRA 17:5)

1. Chlen-korrespondent AN SSSR (for Gel'fand).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GINDIKIN, S.G.; PYATETSKIY-SHAPIRO, I.I.

Algebraic structure of the field of Siegel's modular functions. Dokl. AN SSSR 162 no.6:1226-1229 Je '65. (MIRA 18:7)

1. Submitted December 16, 1964.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 06530-67 EWT(d) IJP(c)

ACC NR: AP7000465 SOURCE CODE: UR/0038/66/030/003/0671/0704

PYATETSKIY-SHAPIRO, I. I., and SHAFAREVICH, I. R.
ORG: none

16
B

Galois Theory of Transcendental Extensions and Uniformization"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Matematicheskaya, Vol. 30, No 3, 1966, pp 671-704

ABSTRACT: The authors construct an algebraic analog of the theory of the uniformization of algebraic manifolds by automorphic functions. The theory constructed is applicable to a certain class of algebraic manifolds over an arbitrary field. In particular, it is applicable over a field of complex numbers to manifolds uniformizable by arithmetic groups. In this case it is equivalent to Hecke's theory of operators. Orig. art. has: 25 formulas. [JPRS: 37,330]

TOPIC TAGS: complex number, transcendental number

SUB CODE: 12 / SUBM DATE: 20 Jul 65 / ORIG REF: 006 / OTH REF: 011

Card 1/1 egh

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACC NR: AT6033685 SOURCE CODE: UR/3231/66/000/001/0010/0030

AUTHOR: Vartanova, L. Yu.; Zhelankina, T. S.; Mebel', S. S.; Pyatetskiy-Shapiro, I. I.

ORG: none

12

TITLE: Determining the focal depth of an earthquake with the aid of a digital electronic computer

SOURCE: AN SSSR. Institut fiziki Zemli. Vychislitel'naya seysmologiya, no. 1, 1966. Analiz seysmicheskikh nablyudeniy na elektronnykh mashinakh (Use of electronic computers in the analysis of seismic observations), 10-30

TOPIC TAGS: earthquake, seismic modeling, computer application, seismic wave

ABSTRACT: This work is a continuation of a previous investigation (I. I. Pyatetskiy - Shapiro et al. DAN SSSR, 1963, 151, no. 2, 323) with the difference that it deals with an iterative process of the successive automatic identification of the pP and sP waves, determination of the corresponding values of the focal depth, and more precise pinpointing of the epicenter, given the time of the first few arrivals (up to five) recorded at a certain number of stations and the travel-time curves of the P-group waves. It is shown that the problem reduces to the

UDC: 550.34-517:681.142.35

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACC NR: AT6033685

simple selection of matching values and corresponding computer flow charts are presented. The computerized experimental verification of data on 121 earthquakes indicates that the problem of determining the focal depth h from among all the normally possible values (from 0 to 790 km) does not always have a unique solution. Hence, further calculations must also be regarded as experimental with the principal purpose of accumulating data for elaborating the criterions for the selection of the optimal solution. Even in its present state, however, this method produces more complete, and hence also more reliable results than manual calculations. The authors are deeply indebted to N. V. Kondorskaya for assistance in selecting the data of the USSR Seismological Service and for valuable suggestions. Orig. art. has: 8 tables, 4 figures, and 15 formulas.

SUB CODE: 08, 09 / SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002
ATD PRESS: 5106

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 11[illegible]8-67 EWT(d)/EWT(1) IJP(c)

ACC NR: AP6030650 SOURCE CODE: UR/0020/66/169/006/1289/1292

AUTHOR: Pyatetskiy-Shapiro, I. I.; Volkonskiy, V. A.; Levina, L. V.; Pomanskiy, A.

ORG: Central Economics Mathematics Institute, Academy of Sciences SSSR (Tsentral'nyy ekonomiko-matematicheskiy institut Akademii nauk SSSR)

TITLE: An iterative method of solving problems of integral programming

SOURCE: AN SSSR. Koklady, v. 169, no. 6, 1966, 1289-1292

TOPIC TAGS: iteration, iterated integral, mathematic analysis, integral programming

ABSTRACT: The iterative method proposed consists of the following: where it is required to maximize the linear functional

$$\sum_{j=1}^{n} c_j x_j \qquad (1)$$

under condition

$$\sum_{j=1}^{n} a_{ij} x_j \leqslant b_i, \quad i = 1, \ldots, m, \qquad (2)$$

where the unknown quantities x_j ($j = 1, \ldots, n$) take on the value 0 or 1 and all coefficients a_{ij}, c_j, b_i are non-negative, the solution is sought as follows. The

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ACC NR: AP6030650

quantity b_0 is fixed and the system of m+1 inequalities

$$\sum_{j=1}^{n} c_j x_j > b_0, \quad \sum_{j=1}^{n} a_{ij} x_j \leqslant b_i, \quad i = 1, \ldots, m, \qquad (3)$$

$$x_j = 0, 1 \quad (j = 1, \ldots, n)$$

is solved by the iterative method. The initial selection x_j^0 is arbitrary. It is assumed the k-th step produces the set $x_j(k)$ $(j = 1, \ldots, n)$. The following equation system is computed

$$Ax \leqslant b, \qquad (4)$$

Using random selection, the components of vector x_j^k with identical probability are changed, $p = \min(c, \max \Delta_i)$. It is assumed that $c = 1/2$. Thus, a new set $x^{(k+1)}$ $(j = 1, \ldots, n)$ is produced, and the subsequent iteration is performed. When all Δ_i disappear, the solution is found. Then, increasing b_0, solution is performed for a new system which is closer to the solution of the initial problem. The process is completed when the system of inequalities ceases to be solved after a fixed number of iterations. The paper was presented by Academician L. V. Kantorovich, Sep 7 1965. The authors express their gratitude to A. D. Shapiro for participating in composition of the examples and discussions of the results. Orig art. has: 1 table and 4 formulas.

SUB CODE: 12/ SUBM DATE: 16Nov65/ ORIG REF: 004/ OTH REF: 001

Card 2/2 jb

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.; [illegible], M.L.

Spinal regulation of movement. Biofizika 9 no.4:488-492 '64. (MIRA 18:3)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

Geometry and classification of bounded homogeneous regions. Usp. mat. nauk 20 no.2:3-51 Mr-Ap '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

NOVIKOV, S.P.; PYATETSKIY-SHAPIRO, I.I.; SHAFAREVICH, I.R.

Fundamental trends in the development of algebraic topology and algebraic geometry. Usp. mat. nauk 19 no.6:75-82 N-D '64 (MIRA 18:2)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

BRYZGALOV, V.I.; PYATETSKIY-SHAPIRO, I.I.; SHIK, M.L.

A two-level model of interaction between automata. Dokl. AN SSSR 160 no.5:1039-1041 F '65. (MIRA 18:2)

1. Submitted September 5, 1964.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

"Lectures on modern mathematics." Vol.1. Zhur. vych. mat. i mat. fiz. 4 no.5:973-974 S-O '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 19094-65 EWT(d)/T/EWP(1) Pg-4 IJP(c)/RAEM(d)/ESD(dp)

ACCESSION NR: AP5000150 S/0103/64/025/011/1572/1580

AUTHOR: Bry*zgalov, V. I. (Moscow); Gel'fand, I. M. (Moscow); Pyatetskiy-Shapiro, I. I. (Moscow); Tsetlin, M. L. (Moscow)

TITLE: Uniform games of automata and their digital-computer simulation

SOURCE: Avtomatika i telemekhanika, v. 25, no. 11, 1964, 1572-1580

TOPIC TAGS: automaton, automata game

ABSTRACT: Examples of the group behavior of automata are considered: a symmetrical game and a circle game. A uniform game presupposes equal rights for all participants (automata). Payoff functions are, in fact, mathematical expectations of gain by each automaton. Automata have no prior information about the system of payoff functions. In the course of a game, the automaton receives information about its gains and losses and uses this information for selecting its strategies. In the circle game, the principal laws of behavior of

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ACCESSION NR: AP5000150

automata, depending on the system of payoff functions, number of automata, and their storage capacity, are explored. It is found that with a favorable structure of the payoff function, the automata reach the Mohr point, i.e., their behavior becomes expedient; the expediency of behavior of individual automata has a much stronger effect on the expedience of their joint behavior than any variation of the number of automata. Games of linear-tactics automata were simulated on a digital computer; Mohr's and Nash's plays were studied. "The authors wish to thank M. S. Mikhaylova for her assistance." Orig. art. has: 2 figures, 8 formulas, and 5 tables.

ASSOCIATION: none

SUBMITTED: 01Nov63 ENCL: 00

SUB CODE: DP, MA NO REF SOV: 005 OTHER: 000

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY, V.Ye. [P'iatets'kyi, V.IU.]; LAZARENKO, K.A. [Lazarenko, K.O.]

Testing barge models with simplified hull lines. Visti Inst. hidrol. i hidr. AN URSR 22:107-113 '63. (MIRA 18:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

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PYATETSKIY, V.Ye. [P'iatets'kyi, V.IU.]

Determining the permissible speed of the "Chaika" type ships in shallow waters. Visti Inst. hidrol. i hidr. AN URSR 22:123-127 '63. (MIRA 18:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

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PYATIBOKOV, L.K.

VORONKIN, I.D.; PYATIBOKOV, L.K.

The BAUP-2 instrument for automatic regulation of temperature in heaters. Biul.tekh.-ekon.inform. no.2:12-14 '58. (MIRA 11:4)
(Thermostat)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATETSKIY-SHAPIRO, I.I.

Arithmetical groups in complex regions. Usp. mat. nauk 19 no.6: 93-121 N-D '64 (MIRA 18:2)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIBRATOV, A., inzhener-podpolkovnik, kand. tekhn. nauk

Technical basis of cybernetics. Tekh. i vooruzh. no.1:24-28 Ja '64. (MIRA 17:6)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

BYATIBRATOV, A., inzhener-polkovnik, kand. tekhn. nauk, dotsent

Ferrites come to the assistance. Tekh. i vooruzh. no.6:34-38 Je'64 (MIRA 17:7)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

DROZDOV, Yevgeniy Afanas'yevich, kand. tekhn. nauk, dots.;
PROKHOROV, Vadim Ivanovich, kand. tekhn. nauk, dots.;
PYATIBRATOV, Aleksandr Petrovich, kand. tekhn. nauk,
dots.; YERLYKIN, L.A., red.

[Fundamentals of computer technology] Osnovy vychislitel'-
noi tekhniki. Izd.2., perer. Moskva, Voenizdat, 1964.
463 p. (MIRA 17:9)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

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L 2923-66 EWT(d)/EWP(1) IJP(c) BB/GG

AM4048667 BOOK EXPLOITATION UR/ 35 B+1

44 Drozdov, Yevgeniy Afanas'yevich (Candidate of Technical Sciences, Docent);
44 Prokhorov, Vadim Ivanovich (Candidate of Technical Sciences, Docent);
44 Pyatibratov, Aleksandr Petrovich (Candidate of Technical Sciences, Docent)
44 16 44

Principles of computer engineering (Osnovy vychislitel'noy tekhniki) 2nd. ed., rev., Moscow, Voyenizdat Min-va obor. SSSR, 1964. 463 p. illus., biblio. 27,000 copies printed. Editor: L. A. Yerlykin; Technical editor: A. N. Mednikova; Proofreader: R. V. Borunova

TOPIC TAGS: computer control, computer input device, computer output device, computer logic, computer memory, electronic digital computer

PURPOSE AND COVERAGE: This book was intended for officers studying the technology of digital computers; it may be used also by engineers and technicians dealing with digital computers. The fundamentals of the construction of electronic digital computers are outlined, and the principles of programming for these computers are analyzed. This edition, as compared with the first edition, contains up-to-date material on elements, subassemblies, and individual structures of these

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machines, and the terminology and definitions have been refined and clarified.

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SUB CODE: DP SUBMITTED: 2Jun64 NR REF SOV: 023

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Pg-4/Pae-2/Pj-4/Pk-4 IJP(c) BB/GG

ACCESSION NR AM4043694 BOOK EXPLOITATION UR/
681.142.621 69
B+1

Drozdov, YEvgeniy Afanas'yevich; Pyatibratov, Aleksandr Petrovich

Automatic conversion and coding of information (Avtomaticheskoye preobrazovaniye i kodirovaniye informatsii), Moscow, Izd-vo "Sovetskoye radio", 1964, 543 p. illus., biblio. 11,300 copies printed

TOPIC TAGS: analog digital conversion, analog digital converter, digital decoder, computer component, automatic control system, telemetry

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telemetric systems.

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Bibliography -- 539

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

DROZDOV, Yevgeniy Afanas'yevich, kand. tekhn. nauk; PROKHOROV, Vladimir Ivanovich, kand. tekhn. nauk; PYATIBRATOV, Aleksandr Petrovich, kand. tekhn. nauk; TIKHONOV, S.N., inzh.-polkovnik, red.; SOLOMONIK, R.L., tekhn. red.

[Principles of computer engineering] Osnovy vychislitel'noi tekhniki. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 425 p. (MIRA 14:12)
(Electronic calculating machines)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ZOTOV, V.P.; SILUYANOV, V.G.; GUGINA, Ye.F.; AUERMAN, L.Ya.; ALEKHINA, M.S.; BEZZUBOV, A.D.; BODROV, V.A.; BUDNYY, A.V.; BURTSEV, Ye.L.; VAYNSHTEYN, V.O.; GAVRILOV, A.N.; GORBATOV, V.M.; GRITSENKO, N.N.; DOLGUSHEVA, L.I.; YEDYGENOV, K.Ye.; ZHURAVLEVA, S.S.; ZACHESKIN, Ya.A.; IVKIN, A.P.; IZOTOV, A.K.; IL'INSKIY, N.A.; IRINARKHOVA, A.M.; KARPENKO, A.K.; LYSOGOR, P.M.; LUPISH, A.T.; OLEYNIKOV, V.V.; ORANZHEREYEVA, V.F.; PETROV, N.A.; PYATIBRATOV, M.A.; ROMANOV, A.N.; RAUBE, P.V.; RYZHENKO, L.P.; SEMYKIN, A.A.; SHEFER, A.P.

G.IA.Ivanov; obituary. NTO 4 no.10:39 O '62. (MIRA 15:9)
(Ivanov, Georgii IAkovlevich, 1897-1962)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIBRATOV, M.A.

[redacted]

Means for over-all mechanization of the baking industry. Khleb.i kond.prom. 1 no.6:1-2 Je '57. (MLRA 10:8)

1.Glavnyy inzhener Rosglavkhleba.
(Bakers and bakeries--Equipment and supplies)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIBRATOV, S.N., inzh.

Experimental determination of the heat capacity of liquid fuels at different temperatures and pressures. Trudy MAI no.132:31-44 '61. (MIRA 14:7)

(Liquid fuels) (Heat capacity)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

S/152/63/000/003/004/005
B117/B186

AUTHORS: Vargaftik, N. B., Kopylov, N. I., Lapushkin, S. A., Pyatibratov, S. N., Sokolov, S. N.

TITLE: Thermophysical properties of monoisopropyl diphenyl

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy.. Neft' i gaz, no. 3, 1963, 75-78

TEXT: Results are given of detailed investigations into the thermophysical properties of monoisopropyl diphenyl in the liquid phase and the pressure of its saturated vapor. Properties of the sample investigated: molecular weight 197, $n_D^{25} = 1.5696$, density at 20°C $\rho = 0.969$ g/cm^3, boiling point 286°C (760 mm Hg). Conventional measuring methods were used. The specific heat (c_p) and the density (ρ) were measured with a calorimeter at 20-398°C and 10 atm with a maximum error of 0.3% for the density and 1.5% for the specific heat. The heat conductivity (λ) was measured with a heated wire at 30-209°C, under atmospheric pressure, with an accuracy of 1%. The viscosity (η) under the pressure of saturated monoisopropyl

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diphenyl vapor was measured at 20-340°C with a maximum error of 1%. The pressure of the saturated vapor (p_s) was measured at 96-309°C. The error was 0.2°C for the temperature determination and 2 mm for the pressure. To determine the thermophysical properties of monoisopropyl diphenyl, the experimental amounts were generalized for smoothed temperature values, as tabulated (Table 2). The table also gives calculated values of the heat of vaporization (r) and the Prandtl numbers required for calculating the heat exchange. There are 2 tables.

ASSOCIATION: Moskovskiy aviatsionnyy institut im. S. Ordzhonikidze (Moscow Aviation Institute imeni S. Ordzhonikidze)

SUBMITTED: January 17, 1963

Table 2. Smoothed values for the thermophysical properties of monoisopropyl diphenyl.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

Thermophysical properties of...

S/152/63/000/003/004/005
B117/B186

t, °C	ρ, g/km^3	c_p, cal/g·°C	$\lambda \cdot 10^5$ cal/cm·sec·°C	$\eta \cdot 10^6$ g/cm·sec	p_s mm Hg	r cal/g	Pr
20	0,969	0,412	303	14,1	—	—	19
40	0,962	0,432	297	6,29	—	—	91,5
60	0,953	0,446	289	3,47	—	—	53,4
80	0,943	0,462	283	2,22	—	—	36,2
100	0,932	0,478	278	1,57	1,5	77,0	27,0
120	0,920	0,494	272	1,17	3,5	75,8	21,3
140	0,907	0,510	266	0,890	8,5	75,0	17,1
160	0,893	0,526	261	0,690	19	74,2	13,9
180	0,878	0,542	255	0,555	39	73,3	11,8
200	0,861	0,560	247	0,456	77	72,5	10,3
220	0,845	0,578	241	0,384	142	71,6	9,22
240	0,827	0,597	236	0,330	249	70,5	8,35
260	0,809	0,616	230	0,289	418	69,2	7,74
280	0,791	0,637	225	0,254	671	67,7	7,19
300	0,773	0,658	216	0,224	1042	65,7	6,76
320	0,753	0,681	211	0,198	1570	63,5	6,39
340	0,734	0,705	205	0,175	2291	60,9	6,02
360	0,714	0,730	200	0,155	3266	57,9	5,66
380	0,694	0,758	192	0,137	4539	54,5	5,41
400	0,674	0,788	183	0,124	6194	50,9	5,34

Card 3/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

SOKOLOV, S.N.; PYATIBRATOV, S.N.

Thermal capacity of liquid hydrocarbons of the methane series.
Izv. vys. ucheb. zav.; neft' i gaz 5 no.7:83-88 '62.
(MIRA 16:7)

1. Moskovskiy aviatsionnyy institut imeni Ordzhonikidze.
(Hydrocarbons--Thermal properties)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

VARGAFTIK, N.B.; KOPYLOV, N.I.; LAPUSHKIN, S.A.; PYATIBRATOV, S.N.; SOKOLOV, S.N.

Thermophysical properties of monoisopropyldiphenyl. Izv. vysh. ucheb. zav.; neft' i gaz 6 no.3:75-78 '63. (MIRA 16:7)

1. Moskovskiy aviatsionnyy institut imeni Ordzhonikidze.
(Biphenyl)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

27857

S/535/61/000/132/003/012
E030/E484

11.0100

AUTHOR: Pyatibratov, S.N., Engineer

TITLE: Experimental determination of the specific heat of liquid fuels at different temperatures and pressures

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.132.1961.31-44. Teplofizicheskiye svoystva nekotorykh aviatsionnykh topliv v zhidkom i gazoobraznom sostoyanii.

TEXT: A direct calorimetric apparatus, which is described in some detail, has been used for determining the specific heats of liquid aviation fuels over the following temperature ranges: gasoline Б-70 (B-70), 22 to 202°C; kerosene T-1, 21 to 248°C; fuel T-5, 24 to 269°C. The data are accurate to 1.9%, being given as smoothed data for every 10°C. The volume of the calorimeter is 55 ml and it is made of stainless steel. The heat capacity of the calorimeter is calculated theoretically. All the data presented appear to be at pressures between 8 and 10 atm, depending on the vapour pressures of the liquids, and the statement is made that specific heat at constant pressure is virtually independent of pressure in the region 1 to 10 atm. In order to reduce the data to a gravimetric basis, densities of

Card 1/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

27857

Experimental determination ... S/535/61/000/132/003/012
E030/E484

these fuels were determined and are tabulated. A.Ye.Sheyndlin is mentioned in the paper. There are 9 figures, 6 tables and 4 references: 3 Soviet and 1 non-Soviet. The reference to an English language publication reads as follows:
Ref.1: Kaye G.W.C. and Laby T.H. "Tables of Physical and Chemical Constants", IL, 1949.

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

KUROCHKIN, B.; KHARCHENKO, I.; PYATIBRATOV, Ya.; SOKOLENKO, V.

Electric locomotive builders need thermosetting insulation lacquers. Elek. i tepl.tiaga 2 no.12:8 D '58. (MIRA 12:1)

1. Direktor Novocherkasskogo elektrovozostroitel'nogo zavoda (for Kurochkin). 2. Predsedatel' zavodskogo komiteta profsoyuza Novocherkasskogo elektrovozostroitel'nogo zavoda (for Kharchenko). 3. Sekretar' partkoma Novocherkasskogo elektrovozostroitel'nogo zavoda (for Pyatibratov). 4. Sekretar' komiteta Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi Novocherkasskogo elektrovozostroitel'nogo zavoda (for Sokolenko).
(Electric locomotives) (Insulating materials)
(Lacquers and lacquering)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

KUZNETSOV, Ivan Kuz'mich, Geroy Sotsialisticheskogo Truda; KAMINSKIY, V.V., gornyy inzh., retsenzent; PYATIBRATOV, Ye.A., gornyy inzh., retsenzent; MUTOVKIN, M.I., gornyy inzh., retsenzent; SEMYNIN, A.P., gornyy inzh., retsenzent; NADION, M.F., otv.red.; ROMANOVA, L.A., red.izd-va; BOLDYREVA, Z.A., tekhn.red.

[Placer mining in permafrost conditions] Razrabotka rossypnykh mestorozhdenii v usloviiakh vechnoi merzloty. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 223 p. (MIRA 14:1)

(Hydraulic mining) (Frozen ground)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

NIKITENKO, V.F. [Nikytenko, V.F.]; PYATIGORSKIY, B.Ya. [P'aityhors'kyi, B.IA.]; SOROKINA, Z.A. [Sorokina, Z.O.]

Electrometric amplifier in using high-ohm glass microelectrodes. Fiziol. zhur. [Ukr.] 10 no.3:407-409 My-Je '64. (MIRA 18:9)

1. Laboratoriya obshchey fiziologii Instituta fiziologii im. A.Bogomol'tsa AN UkrSSR, Kiyev.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKIY, G.M.

Surface ionization of molecules of alkali halide salts. Zhur. tekh. fiz. 35 no.6:1127-1131 Je '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, Khar'kov.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

CHAYKOVSKIY, E.F.; PYATIGORSKIY, G.M.; PTITSYN, G.V.

Temperature hysteresis of positive surface ionization and the work function of a homogeneous emitter. Zhur. tekh. fiz. 35 no.6:1132-1138 Je '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, Khar'kov.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

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L 62228-65 EPF(n)-2/EWP(z)/EWT(m)/EWP(t)/EWP(b) IJP(c) MJW/CL/JD/HW/JG

ACCESSION NR: AP5020740 UR/0057/65/035/008/1493/1500

60
54
B

AUTHOR: Chaykovskiy, E.F.; Pyatigorskiy, G.M.; Ptitsyn, G.V.
55 55 55

TITLE: Thresholds and optimum conditions for positive surface ionization

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1493-1500

TOPIC TAGS: surface ionization, heat adsorption, positive ionization, emission threshold, alkali metal, tungsten, nickel, platinum, molybdenum
27 55,27 27 27 27

ABSTRACT: The theory of surface ionization is discussed and a method is devised for deriving the heat of adsorption of the ion from the envelope of the family of

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L 62228-65

ACCESSION NR: AP5020740

6

consisted mainly of (100) faces, and the Ni and Pt surfaces of (111) faces. The alkali metal vapor pressure was varied from 10^{-6} to 10^{-3} mm Hg; this caused a shift of 350 to 450° in the threshold temperature. The experimental data were processed

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SUBMITTED: 21NOV64 ENCL: 00 SUB CODE: EM, NP

NO REF SOV: 011 OTHER: 004 ATD PRESS: 4076

Card 2/2

NUZHDIN, V.K.; PYATIGORSKAYA, G.Z.

Ways for the complete utilization of copper pyrites from the Khudat deposit. TSvet. met. 37 no.9:9-10 S '64. (MIRA 18:7)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

KURUMCHIN, Kh.A.; GUSHCHINA, G.G.; PYATIGORSKAYA, G.Z.

Pilot plant testing of the hydrometallurgical processing of a copper-zinc pyrite ore dressing product. TSvet.met. 38 no.10:32-35 O '65. (MIRA 18:12)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 59496-65 EPF(c)/EPR/EWG(j)/EWA(c)/EWT(m)/EWP(b)/T/EWP(t) Pr-4/Ps-4 IJP(c)
ACCESSION NR: AP5013710 JD UR/0070/65/010/003/0291/0296
548.736

AUTHOR: Fedulov, S. A.; Pyatigorskaya, L. I.; Venevtsev, Yu. N.

TITLE: Investigation of the $BiFeO_3$-$SrTiO_3$ system

SOURCE: Kristallografiya, v. 10, no. 3, 1965, 291-296

TOPIC TAGS: binary phase diagram, solid solution, alloy, relaxation process, x ray analysis

ABSTRACT: X-ray analysis was used to study the dielectric and magnetic properties of solid solutions in the $BiFeO_3$-$SrTiO_3$ system. The phase diagram of the solid

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dification II). However, the

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L 59496-65

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ACCESSION NR: AP5013710

same temperatures. When the $BiFeO_3$ content is greater than 60%, cubic modification II, which has relaxation polarization, is transformed into a rhombohedral modification in which ferroelectric properties are combined with weak ferromagnetic properties. Because the conductivity of samples increases with $BiFeO_3$ content, the maximum on the curve $\varepsilon = f(T)$ could be detected only for the sample with 60% $BiFeO_3$. The Curie point of this sample is approximately 330°C. From X-ray data it can be concluded that the Curie temperature of the samples increases with $BiFeO_3$ content. [illegible] concerning the polarization of $SrTiO_3$-$Bi_2O_3 \cdot 3TiO_2$

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

sincere gratitude to V. M. Petrov for discussing the [illegible]
art. has: 5 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 05Aug65 ENCL: 01 SUB CODE: SS, EM

NO REF SOV: 008 OTHER: 005

Card 2/3

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L 59496-65

ACCESSION NR: AP5013710

ENCLOSURE: 01

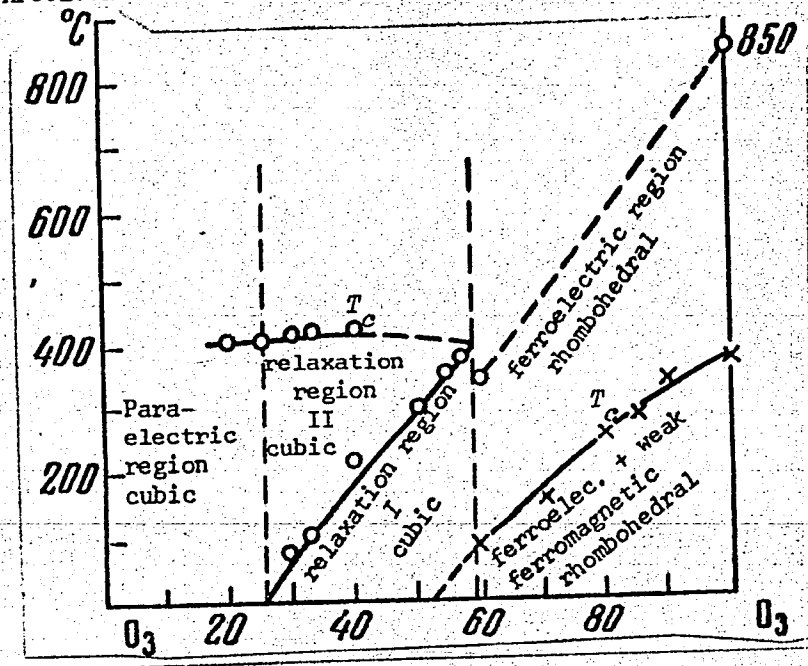

Fig. 1.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GRIGOR'YEV, A.T.; SOKOLOVSKAYA, Ye.M.; SIMANOV, Yu.P.; SOKOLOVA, I.G.; MAKSIMOVA, M.V.; PYATIGORSKAYA, L.I.

High-temperature forms of chromium and phase diagram of the system chromium - iron at high temperatures in the region rich in chromium. Zhur.neorg.khim. 5 no.9:2136-2138 S '60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet, Kafedra obshchey khimii i Kafedra neorganicheskoy khimii.
(Chromium) (Iron)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACCESSION NO: AP4013507 S/0181/64/006/002/0475/0478

AUTHORS: Fedulov, S. A.; Lady*zhinskiy, P. B.; Pyatigorskaya, L. I.; Venevtsev, Yu. N.

TITLE: Complete phase diagram of the system $PbTiO_3$ $BiFeO_3$

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 475-478

TOPIC TAGS: phase diagram, PbTiO sub 3, BiFeO sub 3, piezoelectric, phase transition, Curie point, morphotropic phase transition, polarization, ferroelectric, ferromagnetic, Neel temperature, conductivity

ABSTRACT: Using x-ray investigations and electrical and magnetic measurements, the authors have constructed a complete phase diagram of the system $PbTiO_3$-$BiFeO_3$. This diagram is shown in Fig. 1 on the Enclosure. It is seen that in the region of the morphotropic phase transition the Curie point is very high (on the order of 700C), and it therefore seems suitable (in order to obtain high-temperature piezoelectric material) to introduce other material into the system to decrease the conductivity and to improve the conditions of polarization. The authors suggest, from this point of view, studies of the three-component systems $PbTiO_3$-$BiFeO_3$-$PbZrO_3$ and $PbTiO_3$-$BiFeO_3$-$LaAlO_3$. "The authors consider it their duty to express

Card 1/3

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACCESSION NO: AP4013507

thanks to Yu. Ye. Roginskaya for her aid in the work." Orig. art. has: 5 figures.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chisty*kh khimicheskikh veshchestv, Moscow (All-Union Scientific Research Institute of Chemical Reagents and Extra Pure Chemical Substances)

SUBMITTED: 12Aug62 DATE ACQ: 03Mar64 ENCL: 01

SUB CODE: PH NO REF SOV: 009 OTHER: 001

Card 2/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

S/078/62/00...
B101/B110

AUTHORS: Grigor'yev, A. T., Sokolovskaya, Ye. M., Pyatigorskaya, L. I., Maksimova, M. V.

TITLE: Solid-state conversions in alloys of the system chromium-iron

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 5, 1962, 1105-1109

TEXT: 60 alloys of electrolytic chromium and iron (up to 80 at% Fe) were investigated by plotting the differential heating curves, contact-free thermal high-temperature analysis, determining hardness and microhardness after 1000 hr tempering and subsequent hardening (1800-400°C in oil, 1300-300°C in H_2O). The phase diagram Cr-Fe was plotted on the basis of these data (Fig. 3). The existence of the five chromium modifications α-ε was confirmed. There are 4 figures and 2 tables. The most important English-language references are: P. O. Williams, H. W. Paxton, J. British Iron and Steel Inst., 185, 358 (1958); P. O. Williams, Trans. Metallurg. Soc., ASME, 212, 497 (1958).

Card 1/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

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B101/B110

Solid-state conversions in...

SUBMITTED: June 23, 1961

Fig. 3. Phase diagram of the system chromium-iron on the basis of the authors' results. (1) Polymorphous conversions; (2) thermal analysis; (3) electrical resistance; (4) one phase; (5) two phases.

Legend: Am.% Fe = at% Fe.

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B101/B110

Solid-state conversions in...

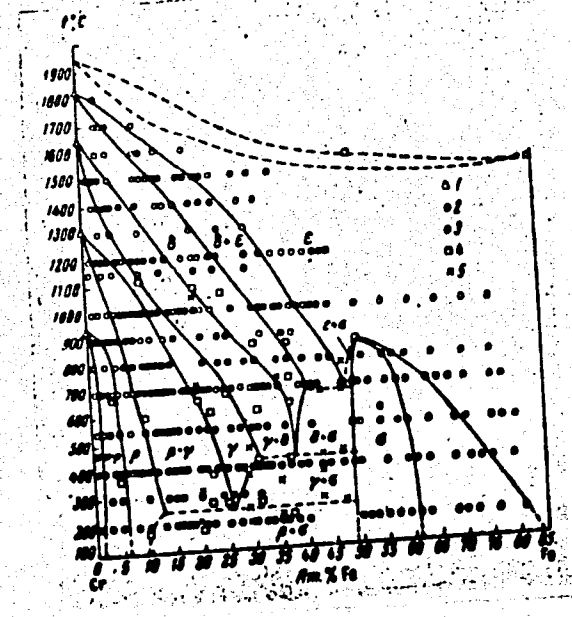

Fig. 3

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PYATIGORSKAYA, L.M.

KRITSMAN M. G., KOMIKOVA A. S., STEPANIAN D. G., PIATIGORSKAIA L.M.

Issledovanie pri pomoshchi radiometionina azotistogo obmena pri diabetse. [Investigation with the aid of radioactive methionine of nitrogen metabolism in diabetes] Biokhimiia, Moskva 16:3 May-June 51 p. 246-9.

1. L. M. Pyatigorskaya, deceased.
2. Institute of Biological and Medical Chemistry of the Academy of Medical Sciences USSR, Moscow.

CIML 20, 10, Oct. 51

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKAYA, L. Z.

AUTHORS: Vlasov, V. V., and Pyatigorskaya, L. Z. 126-2-30/35

TITLE: Investigation of the influence of the material of a component on the field of a defect. (Issledovaniye vliyaniya materiala izdeliya na pole defekta).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.2, pp. 376-377 (USSR)

ABSTRACT: It was found experimentally that internal transverse cracks in heads of light-weight rails can be detected by a magnetic defectoscope to a greater depth than for rails of the heavier type if an induction of a frequency of 4 to 5 kc/s is used. This was attributed to the fact that light-weight rails have been longer in service and, therefore, were work hardened to a greater degree than heavy weight rails. The authors investigated the effect of differing magnetic properties in a layer of the metal on the field of a defect which simulated artificially a transverse crack. For investigating the field of the defect a specimen was used which was of the same design as that designed in earlier work (Ref.2). The defect consisted of a strip of 0.02 mm thick paper placed between the faces of two cylindrical specimens made of Steel 40, each being 10 cm long and 8 mm in dia. These cylinders were fitted with alternately hollow cylinders made of

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126-2-30/35

Investigation of the influence of the material of a component on the field of a defect.

Steel 10, 40 and 65 with an internal diameter of 8 mm and a wall thickness of 1.5 mm. Their coercive force was respectively 1.9, 3.5 and 11.8 Oe. Thus, the depth of the defect was 1.5 mm and the material had in two cases magnetic properties differing from those of the basic material. The investigations consisted of determining the tangential component of the field of the defect on the surface of the specimen and for this purpose it was placed between the poles of an electromagnet. The field was measured with a small flat coil and was determined by changing over the polarity of the current in the electromagnet. The results are plotted in Fig.1. It was found that a hard layer on the top does indeed bring about an increase of the field of a defect and this elucidates qualitatively the difference in the possibility of detection of defects in rails with little and with considerable work hardening of the surface layer.

Card 2/2

There are 1 figure and 3 Slavic references.

SUBMITTED: July 21, 1957.

ASSOCIATION: Institute of Physics of Metals, Ural Branch of the Ac.Sc. USSR (Institut Fiziki Metallov Ural'skogo Filiala AN SSSR)

AVAILABLE: Library of Congress.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKAYA, L. Z.

126-2-31/35

AUTHORS: Vlasov, V. V., and Pyatigorskaya, L. Z.

TITLE: Comparative investigation of the field of open and internal defects. (Sravnitel'noye issledovaniye polya otkrytogo i vnutrennego defektov).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.2, pp. 377-378 (USSR)

ABSTRACT: According to the theory of R. I. Yanus (Ref.1) which was further developed by Sapozhnikov, A. B. (Ref.2), the magnetic non-linearity of the material of a component which contains cracks is of great importance from the point of view of formation of the field of defects. Under magnetostatic conditions the field of a defect is produced by surface magnetic charges located directly at the walls of the defect and by space charges which are due to magnetic non-linearity of the material of the component in the sections of the metal which are near to the defect. The field of these charges show differing dependence on the magnetizing field. According to this theory, space charges will intensify the field of the defect in the case of magnetizing fields (internal field in the component) exceeding the field strength which corresponds to the maximum magnetic permeability and will weaken that field if the field strength is lower. One

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126-2-31/35

Comparative investigation of the field of open and internal defects.

of the authors of this paper and E. E. Stoinskaya (Ref.3) studied experimentally the influence of magnetic non-linearity of the material of a component on the field generated by the defect. However, they studied only the field of a defect in the range of comparatively strong magnetic fields. The authors of this paper considered it of interest to investigate the field of internal defects within a wider range of magnetizing fields and for this purpose they made a comparative study of the field of an open and a closed defect of equal size. The investigations were carried out using an artificial defect which simulated the transverse crack at the head of a rail. A specimen was used which in design and dimensions was equal to that described in earlier work (Ref.3). The defect was formed by an 0.02 mm strip of paper between the two end faces of continuous steel cylinders and this was considered as being an open defect. The same defect became an internal one after sliding on a hollow cylinder with an internal diameter equalling the external diameter of the solid cylinders above the defect. The wall thickness of the

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

hollow cylinder was 1.5 mm and represented in the given case the depth of location of the defect. The investigation consisted of determining the tangential component of the field of the defect at the surface of the specimen. Whether it is permissible to use in the given case a specimen of the here mentioned design has been dealt with in the earlier work mentioned above (Ref.3). The specimen was placed between the poles of an electromagnet. The field was measured by means of a small flat coil during switching the current of an electromagnet. The results of measurements of the tangential components H_d of the fields of an open and of a closed defect as a function of the induction B in the specimen are graphed in Fig.1. Curves 1 and 2 refer respectively to the open and the closed defects. It can be seen from the graph that at low inductions (up to 4 kGauss), i.e. in weak fields, the field of internal defects is considerably lower than the field of an open defect. However, for inductions exceeding 4 kGauss the field of an internal defect H_d is higher than that of an open defect and the difference will be the more pronounced the higher the induction in the specimen.

 This difference in the behaviour of the field of a

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126-2-31/35

Comparative investigation of the field of open and internal defects.

defect in dependence of the external field is in good agreement with the theory of Yanus-Sapozhnikov and is obviously due to the magnetic non-linearity of the material of the component. In Fig.1 the relation between H_d in Oe. and B in kGauss is graphed for both types of defects.

There are 1 figure and 3 references, all of which are Slavic.

(Note: This is a complete translation).

SUBMITTED: August 21, 1957.

ASSOCIATION: Institute of Physics of Metals, Ural Branch of the Ac. Sc. USSR (Institut Fiziki Metallov Ural'skogo Filiala AN SSSR).

AVAILABLE: Library of Congress.

Card 4/4

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

Pyatigorskaya, I. Z.

VLASOV, V.V.; PYATIGORSKAYA, I.Z.

Investigating the effect of the material used in a product on the field of its defect. Fiz. met. i metalloved 5 no.2:376-377 '57. (MIRA 11:3)

1. Institut fiziki metallov Ural'skogo filiala AN SSSR.
(Metals--Defects) (Railroads--Rails--Testing)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKAYA, L.Z.

VLASOV, V.V.; PYATIGORSKAYA, L.Z.

Comparative investigation of fields of surface and internal defects. Fiz. met. i metalloved 5 no.2:377-378 '57. (MIRA 11:3)

1. Institut fiziki metallov Ural'skogo filiala AN SSSR.
(Metals--Defects)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

BEKISHEV, I.S., inzh.; GLUKHOV, B.A., inzh.; PYATIGORSKAYA, M.M., inzh.

New working components of blade paddle concrete mixers of the rotary (turbine) type. Stroi. i dor.mash. 10 no.12:30-31 D '65. (MIRA 19:1)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKAYA, T. I.

VOLKOV, Ye.N., kandidat tekhnicheskikh nauk; PYATIGORSKAYA, T.I., starshiy nauchnyy sotrudnik.

Technology of producing powdered beans. Trudy VNIIKOP no.6:151-159 '56. (MLRA 10:5)

(Beans--Drying)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

VOLKOV, Ye.N., kand. tekhn. nauk; STEPCHKOV, K.A., kand. tekhn. nauk; STRASHNENKO, Ye.S.; PYATIGORSKAYA, T.I.; PARAMONOVA, Ye.S.; KOTOVICH, A.G.; NEMTSOVA, A.S.

Production technology, testing and storage of hydrolyzates and protein enrichers from soya. Trudy VNIIKOP no.11:66-76 '62. (MIRA 17:9)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

KAZIMIRSKIY, Ya.M., starshiy nauchnyy sotrudnik; ZVEREVA, T.A., starshiy nauchnyy sotrudnik; GRANOVSKAYA, R.Ya., mladshiy nauchnyy sotrudnik; PYATIGORSKAYA, T.I., starshiy nauchnyy sotrudnik

Technical and economic effectiveness of the steam-heating, and mechanical methods of preparing potatoes for drying. Trudy VNIIKOP no.9:26-52 '59. (MIRA 14:1)

(Potatoes--Drying)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

VOLKOV, Ye.N.;STEPCHKOV, K.A.;PYATIGORSKAYA, T.I.

Use of soybean hydrolysates for increasing the nutritive value and flavor quality of concentrates. Kons. i ov. prom. 12 no.3:5-8 Mr '57. (MLRA 10:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti.
(Soybean) (Food concentrated)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKAYA, T.I., starshiy nauchnyy sotrudnik.

Colloid-chemical change in apple sauce during drying. Ref. nauch. rab. VNIIKOP no.3:61-66 '55. (MLRA 9:11)
(Apple) (Food--Analysis)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKIY, A.A., inzh. (Tashkent)

At a seminar on the construction industry. Gidr. i mel 17 no.2:57-60 F '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

GOLOV, D. (g.Kiyev); PYATIGORSKIY, B. (g.Kiyev)

Two-channel measuring amplifier. Radio no.4:49-51 Ap '61. (MIRA 14:7)

(Medical electronics)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

S/196/62/000/005/008/012
E194/E154

AUTHOR: Pyatigorskiy, B.M.

TITLE: A phase selective impulse initiating relay

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.5, 1962, 28, abstract 5 E186. (Elektroenergetika, no.4, 1961, 55-63)

TEXT: ENIN of AS USSR has developed a relay which is a component part of a protective system for long transmission lines. The relay initiates the protection and selection of the damaged phase by reacting to electromagnetic waves set up in the transmission line at the instant of short-circuit. The damaged phase is identified by comparing in pairs the signs of three differences between current (or voltage) waves: $i_c - i_a$; $i_a - i_b$; $i_b - i_c$; using three phase-sensitive circuits. It is shown that when single- and two-phase short circuits occur at any instant the two magnitudes applied to the phase sensitive circuit of the damaged phase are of different sign. A positive impulse then appears on the output of this circuit, while the voltage at the output of the

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phase-sensitive circuits of the undamaged phases is either negative or zero. In case of a three-phase short circuit a positive impulse can appear at the output of the phase-sensitive circuit of any one phase or two phases. In this latter case the relay selects one of the two damaged phases (the leading one). When two-phase earth faults occur at the instant when the voltage is equal in the faulty phases a small positive impulse may appear at the output of the phase sensitive circuit of the undamaged phase. However, to avoid mal-operation due to interference the relay should not be too sensitive and so incorrect operation is avoided. Moreover, a fault of this kind is improbable. The corresponding current differences are applied to the phase sensitive circuit through intermediate impulse transformers and filters which do not pass 50 c/s. The voltage from each of the phase sensitive circuits is applied to its trigger circuit. An electromagnetic relay is connected into the collector circuit of the triode T_2 (see circuit diagram). When a signal is applied to the input of the unit (base of triode T_1) the triode T_2 blocks for a time sufficient for the operation of the relay and the unit

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then returns to its previous condition. A positive impulse might be applied to two trigger units simultaneously, and so that only one of them should operate, the trigger of the lagging phase is interlocked with that of the leading phase. The interlocking circuit consists of a capacitor, a diode and a resistance in series and connects the collector of the triode T_2 of the leading phase unit to the base of the same triode of the lagging phase. When the triode of the first unit begins to conduct, the voltage on its collector suddenly increases. This potential is applied through the interlocking circuit to the base of the second triode of the second unit. Under these conditions the triode T_2 of the second unit cannot become conducting. Correct operation of the relay was checked in a laboratory. The relay correctly selects the damaged phase on the occurrence of a single-phase fault and the leading damaged phase in the case of two phase faults to earth. Impulses of from 3 to 5 microseconds are sufficient to operate the relay. The relay sensitivity is threefold relative to single-phase faults. 4 literature references.

 [Abstractor's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKIY, B.Ya.

Compensation methods in high-frequency distortions caused by high-resistance microelectrodes. Biofizika, 7 no.2:235-239'62. (MIRA 16:8)

1. Institut fiziologii imeni A.A.Bogomol'tsa AN UkrSSR, Kiyev.
(ELECTROPHYSIOLOGY) (ELECTRODES)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 13963-66

ACC NR: AT6003457 SOURCE CODE: UR/0000/65/000/000/0094/0103

AUTHOR: Pyatigorskiy, B. Ya.

ORG: Institute of Physiology im. A. A. Bogomolets, AN UkrSSR, Kiev (Institut fiziologii AN UkrSSR)

TITLE: Frequency method for studying transmission of information through synaptic connections in the brain

SOURCE: AN UkrSSR. Issledovaniya po bionike (Research in bionics). Kiev, Naukova dumka, 1965, 94-103

TOPIC TAGS: central nervous system, neuron, bionics, brain

ABSTRACT: The author uses the frequency method for a tentative analysis of information transmission through a synaptic connection. The electrical model of the receptor neuron-transmitter neuron was made up of a pulsed element and pulse amplifier connected in series. The experimental data were obtained by electrical stimulation of the afferent fibers which make up the muscular nerves of the lower extremity in a cat (n. hamstring, guadriceps, gastrocnemius). The experimental procedure is

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ACC NR: AT6003457

briefly discussed and a description and block diagrams are given of the equipment used for recording and analysis of the experimental data. These data consisted of the responses of 40 transmitting cells to stimulation of afferent fibers. It is found that the system in the brain which transmits information on mechanical processes in the muscles is a linear pulsed amplifier at the level of the second link. The complex transfer constant for this link is equal to unity. The experimental data show that this link differs considerably from the other links in synaptic transmission. Due to broad convergence, the second neurons in the system for skin sensitivity respond to a single input pulse with grouped discharge. The number of pulses in this discharge depends both on the prf at the input and on the rate at which this frequency changes. This indicates that the transfer function for the second link in this system is more complex in form. The proposed method and the equipment used for carrying this method out may be used for studying other links in the central nervous system. The evolutionary implications of the results are discussed. Orig. art. has: 5 figures.

SUB CODE: 06/ SUBM DATE: 25Aug65/ ORIG REF: 005/ OTH REF: 014

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

L 23651-65 EWO(j)/EWT(d)/FSS-2/EWO(r)/EEC(k)-2/EWO(a)/EWO(e) Po-4/Pq-4/Pg-4/
Pk-4/Pl-4

ACCESSION NR: AP5005369 S/0219/64/058/009/0120/0123

32
31
B

AUTHOR: Pyatigorskiy, B. Ya.

TITLE: New principle for construction of a pre-amplifier for microelectrode recording

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 58, no. 9, 1964, 120-123

TOPIC TAGS: medical equipment, integrated electronic device

ABSTRACT: The article presents a mathematical analysis and wiring diagram for a pre-amp circuit designed to improve the performance of high-impedance

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Orig. art. has: 3 figures, 9 equations.

Card 1/2

L 23651-65

ACCESSION NR: AP5005369

ASSOCIATION: Laboratoriya obshchey fiziologii Instituta fiziologii im. A. A. Bogomol'tsa AN UkrSSR, Kiev (Laboratory of General Physiology, Institute of

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Physiology, AN UkrSSR)

SUBMITTED: 24Feb64 ENCL: 00 SUB CODE: LS, EC

NO REF SOV: 002 OTHER: 005 JPRS

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACCESSION NR: AP4040315 S/0057/64/034/006/1092/1100

AUTHOR: Chaykovskiy, E.F.; Pyatigorskiy, G.M.

TITLE: On determining the heat of desorption of positive ions in the surface ionization of alkali metal atoms

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.6,1964, 1092-1100

TOPIC TAGS: ionization, surface ionization, ionization phenomena, desorption, adsorption, alkali metal, potassium

ABSTRACT: The relation between the surface ionization current and the temperature of the adsorbing surface is discussed in considerable detail on the basis of the equation

$$n=\sigma\left[C\exp\left(-\frac{\lambda_+}{kT}\right)+D\exp\left(-\frac{\lambda_0}{kT}\right)\right],$$

relating the flux n of incident atoms, the surface density σ of adsorbed atoms, and the heats of desorption λ_+ and λ_0 of the adsorbed ions and atoms, respectively; C and D are constants proportional to the statistical weights of the ions and atoms, and it is further assumed that λ_+ is a linear function of σ and the degree of ioni-

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

ACCESSION NR: AP4040315

zation of the adatoms decreases rapidly with increasing σ. The threshold effect is derived. The occurrence of hysteresis is explained, and the conditions under which it may be expected are derived. The influence of the oven temperature is also discussed. The ionization of potassium on a tungsten surface was investigated experimentally. The 8 mm diameter adsorber-emitter was made of rolled tungsten sheet and was found by x-ray diffraction to be highly oriented with the (001) faces exposed. The collector was located 0.5 mm from the emitter, with a grid between the two electrodes to suppress secondary emission. The electrodes and the oven for evaporating the potassium were enclosed in a vessel with heated walls, which could be opened without breaking the vacuum. The usual aging and outgassing procedures were followed, after which the ion current and degree of ionization were measured as functions of the emitter temperature. The results are presented graphically. The relation between ion current and emitter temperature in the threshold region was found to be close to that reported by J.H.Childs (Paper Ins.Aeronaut.Sci.103,45,1959). The heat of desorption of the potassium ions was calculated from the data and was found to be 2.2 ± 0.15 eV/ion; in this calculation the values 4.34 V and 4.52 eV were adopted for the ionization potential of potassium and the work function of the (001) tungsten surface, respectively. Two possible sources of systematic error are mentioned: 1) the vacuum (10^{-7} tor) may not have been sufficiently high to prevent

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ACCESSION NR: AP4040315

oxidation of the tungsten surface and consequent increase of its work function; 2) the published values of the vapor pressure of potassium are not as accurate as is necessary for adequate reduction of the data. The errors from these sources may have partially compensated each other, for the measured degrees of ionization were below those calculated from the Saha-Langmuir equation. "In conclusion the authors consider it their pleasant duty to express their gratitude to Doctor of Physico-mathematical Sciences, Prof. N. I. Ionov, Doctor of Physico-mathematical Sciences, Prof. E. Ya. Zandberg, and Candidate in Physico-mathematical Sciences N. D. Potekhinaya for very valuable advice and discussions." Orig. art. has: 21 formulas and 5 figures.

ASSOCIATION: none

SUBMITTED: 18Jun62 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: NP NR REF SOV: 014 OTHER: 005

Card 3/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

CHAYKOVSKIY, E.F.; SKRYNNIK, Yu.B.; PYATIGORSKIY, G.M.

Device for studying the positive ionization of vapors of alkali metals and their salts on the surface of single-crystal emitters. Prib. i tekh.eksp. 10 no.5:164-169 S-O '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, Khar'kov. Submitted August 7, 1964.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343720012-8

PYATIGORSKIY, G.M.

Electrostatic interaction in the adsorption of ions on the surface of metals. Zhur.fizicheskoy khim. 37 no.10:2315-2318 O '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov.

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L 54753-65 EWT(1)/EWT(m)/EPF(c)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(m)-2 Pab-10/Pr-4
IJP(c) JD/JH/JG

ACCESSION NR: AP5015638 UR/0057/65/035/006/1127/1131
44
39
B

AUTHOR: Pyatigorskiy, G.M.

TITLE: On the surface ionization of alkali halide molecules

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.6, 1965, 1127-1131

TOPIC TAGS: surface ionization, alkali halide, thermodynamic equilibrium

ABSTRACT: The surface ionization coefficient of an alkali halide molecule is calculated under the assumption that every molecule inci-

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