

ACC NR: AP7003:02

SOURCE CODE: UR/0056/66/051/006/1622/1633

AUTHOR: Golovashkin, A. I.; Levchenko, I. S.; Motulevich, G. P.; Shubin, A. A.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Optical properties of indium

SOURCE: Zh eksper i teor fiz, v. 51, no. 6, 1966, 1622-1633

TOPIC TAGS: indium, optic property, conduction electron, electron density, electron collision

ABSTRACT: This is a continuation of earlier investigations of the optical properties of polyvalent metals carried out at the Optical Laboratory of the Physics Institute im. P. N. Lebedev (ZhETF v. 51, 1220, 1966, and earlier). The present paper deals with the optical properties of indium in the range from 0.55 to 10 μ , made at temperatures 4.2 and 295K. A new technique for preparing indium films whose properties do not differ greatly from those of bulk indium is described. The experimental apparatus was described in earlier papers. The measurements at room temperature, which were carried out in two different experimental setups, agreed within 0.5%. The measurements at helium temperature were performed with the apparatus described earlier (ZhETF v. 47, 64, 1964). The following microscopic properties of the conduction electrons were determined: conduction electron density, electron collision frequency, mean electron velocity on the Fermi surface, and total area of the Fermi surface.

Card 1/2

ACC NR: AP7003202

The following characteristics of the interband transitions were determined: Fourier coefficients of the pseudopotential, threshold frequencies of the interband transitions, and the frequency dependence of the absorption near threshold. Relationships between these two groups of properties are established and the temperature dependences of the properties are determined. The agreement between the electron-structure parameters obtained by different methods indicates that these relationships agree well with reality. Orig. art. has: 6 figures, 12 formulas, and 4 tables.

SUB CODE: 20/ SUBM DATE: 23Jun66/ ORIG REF: 014/ OTH REF: 006

Card 2/2

S HUBIN, A. B.

report to be presented at the 1st Intl Congress of the Intl Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

LENER, A. Ye. - "On application of a self-adjusting system of automatic control".

MAJID, F. B. - "Statistical synthesis of impulse systems".

MATVEY, M. V. - "Some peculiarities of the structure of multi-channel management systems and digital techniques".

MIRVALIDOV, V. H. - "Evaluation indexes and the possibility of communications regulation systems".

NEKHAZOV, V. V. - "Concerning the problem of established routines in automatic regulation systems".

NEKHAZOV, E. A. - "Principles of construction of digital double code automatic computers".

NEKHAZOV, Yu. I. - "Concerning the relation of systems of automatic regulation with the parameters of periodic movements".

NEKHAZOV, S. D., and KRYAZEV, V. L. - "Systems of automatic control of cutting lathes with a continuous bar mill with the use of digital calculating machines".

OSIPENKO, V. M. - "Some principles of organizing systems of complex automation of large scale chemical production and optimization of these systems".

OSIPENKO, O. M. - "Systems of automatic regulation with intermittent change of parameters".

PEKOV, V. P. - "Statistical synthesis of impulse systems".

PEKOV, B. B. - "The inversion principle and its application in the calculation of linear and nonlinear systems".

PIVNEV, V. D. - "The problem of autonomy in the technique of automatic control".

PIVNEV, M. P. - "Some problems of synthesis of automatic control non-linear systems".

PIVNEV, M. S. - "Method of determining the optimum system with non-linear elements".

PIVNEV, M. S. - "The problem of autonomy in the technique of automatic control".

PIVNEV, V. P., PETROV, V. V., KURDYUMOV, R. V., and VOLODIN, E. E. - "Principles of construction of a single class of extra control systems for automating production processes".

RODINSKIY, V. M. - "The development of the theory of relay devices in the USSR".

ROZENTHAL, M. A. - "Dynamic characteristics of cores with light angle hysteretic winding and their influence on magnetic boosters".

ROZENTHAL, L. I. - "Simplified methods of investigating the quality of automatic control systems".

RUSSKOV, V. M. - "Dynamics of automatic regulation of boiler-turbine units".

RUSSKOV, M. M., MELNICHENKO, L. V., KALININ, A. A., KUCHENKO, G. G., and PIVNEV, L. A. - "Automatic control of composition of multi-component mixtures".

RUSSKOV, M. M., and GREGOROV, V. G. - "Some results of work for the utilization of radioactive radiation for automatic control of aiming machinery".

SOLDOVILNIKOV, Y. V., BAYKOV, A. M., PARUSIN, V. M., VALDNER, Yu. S., MALYKH, P. B., and POPOV, A. E. - "Analysis and synthesis of automatic control systems with the aid of calculating machines".

STANISLAVSKIY, R. I., FISHCHIK, I. E., and KURDYUMOV, R. V. - "Automatic facilities and their use for solution of variation problems in automatic synthesis".

STANISLAVSKIY, R. I. - "A system of alternating current electric drives with automatic power supply".

TALAN, I. M., and VALDNER, V. A. - "Separate for technical control of production with the use of nuclear radiation".

TARNOVSKIY, E. F., and BEZUKHIN, G. A. - "Methods of organizing the trajectory of roots of linear systems and qualitative determination of type of trajectory".

TRIFKIN, Ye. Z. - "Elements of the theory of digital automatic systems".

VERHOVODSKIY, D. B., GREGOROV, V. A., CHEJEN, Yu. I., and SHAROVA, G. A. - "Static stability of telemeasurement".

VINIKOV, V. A. - "Some aspects of a mathematical modeling and calculating technology experiment in calculating loads in electrical systems".

S/194/61/000/006/026/077
D201/D302

16,8000

AUTHOR: Shubin, A.B.

TITLE: Circuits of the control unit of multichannel automatic optimizers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1961, 44, abstract 6 V311 (V sb. Avtomat. upravleniye. M., AN SSSR, 1960, 129-134)

TEXT: Multi-channel automatic optimizers have operational and control parts. The control part assures the required sequence of operations with various methods of optimization (the Gauss-Seidel method, the method of greatest slope, the gradient method) together with transitions from one method to another. A circuit is described as designed for a 12-channel automatic optimizer. The circuit uses electron tubes and provides 100 operations per second. 3 references. [Abstracter's note: Complete translation]

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Card 1/1

S/103/60/021/05/09/013
BO07/BO11

AUTHOR: Shubin, A. B. (Moscow)

TITLE: Ten-channel Automatic Electronic Relay Optimizer

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 5,
pp. 624 - 632

TEXT: The process of automatic determination of partial derivations and the motion in the direction of gradients can be realized with the aid of the so-called systems of automatic optimizing. Theoretical considerations on the searching process are given in the papers of Refs. 1, 2. The paper of Ref. 3 offers a complete description of the electronic variety of the optimizer. An electronic relay system which searches the extremum automatically is described in the present paper. This system is designated as an optimizer. I. N. Bocharov, A. V. Kalinin, R. I. Stakhovskiy, and the author took part in the planning and adjusting of the system. The optimizer allows the search for the extremum of a function of several variables (up to 10) in the pre-

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Card 1/3

Ten-channel Automatic Electronic Relay
Optimizer

S/103/60/021/05/09/013
B007/B011

sence of restrictions. The functions whose extremum is to be found and the restricted functions are given to the optimizer in the form of d-c voltages whose variation range equates ± 100 v. The optimizer can operate with an object supplying the values of functions whose extremum is to be found in a continuous operation, it can, however, work also with such objects as supply the function values at certain instants only (e. g., after the solution on an electronic simulator). The optimizer consists of two parts: the operational and the control part. The computing part of the automatic optimizer is based on continuous electronic blocks. The voltages x_1, x_2, \dots, x_{10} at the output are produced on d-c integrators. The system is chiefly intended for operations with an electric simulator. The accuracy of the operations carried out by the simulator and the optimizer is of the same order. The control part of the optimizer analyzes the information reaching the optimizer as well as the state of the optimizer itself, and switches according to the information obtained. Relay and step-by-step switches are the main elements of the control part. Fig. 1 shows the optimizer from outside, Fig. 2 the basic circuit of the operational part whose mode of operation is described, Figs. 3 and 4

Card 2/3

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Ten-Channel Automatic Electronic Relay
Optimizer

S/103/60/021/05/09/013
B007/B011

the circuits of the various blocks and, finally, Fig. 5 illustrates the circuit of the control block. The various parts are described, and their mode of operation is explained. An example illustrates the solution of a problem with the aid of an automatic optimizer. In conclusion, the following is stated: The system described allows variation problems and problems of finding the extremum of a function of several variables. The optimizer given here chiefly serves for working with an electronic simulator with relay control. The principles applied in this instrument can be, however, also applied in the manufacture of optimizers operating with real objects. It is pointed out that an optimizing of real objects to be carried out in two time ranges is possible: a quick finding of the extremum on the simulator and the subsequent transfer of results on the real object. There are 6 figures and 3 Soviet references.

SUBMITTED: January 5, 1960

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C

Card 3/3

L 04910-67

ACC NR: AT6022676

SOURCE CODE: UR/0000/66/000/000/0081/0093

AUTHOR: Sagalov, Yu, E.; Frolov, V. I.; Shubin, A. B.

43
B

ORG: none

TITLE: Automatic teaching of threshold elements and threshold networks

SOURCE: Moscow. Institut avtomatiki i telemekhaniki. Samoobuchayushchiyesya avtomaticheskoye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 81-93

TOPIC TAGS: Boolean algebra, threshold element, pattern recognition, automatic machine teaching, adaptive pattern recognition

ABSTRACT: The threshold element (TE) and threshold function are defined and pertinent mathematical expressions are derived. Linear separability problems are briefly discussed. The automatic teaching of TE is analyzed and the concept of the teaching sequence is explained. The mathematical apparatus for the geometric interpretation and proof of the convergence of the TE teaching process is presented and an algorithm is derived. A system for the automatic synthesis of threshold elements operating according to this algorithm is described, along with a disoussion of the technical realization of the error detection circuitry. By extrapolation,

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ACC NR: AT6022676

many of the conclusions reached with regard to TE are applied to a study of threshold networks (a set of TE connected in some fashion), and it is shown that the use of such networks is dictated by the impossibility of realizing relatively complex functions with a TE alone. Some results of experiments involving the teaching of TE and threshold networks are briefly discussed. Orig. art. has: 7 figures and 19 formulas.

SUB CODE: 0906 / SUBM DATE: 02Mar66/ ORIG REF: 002/ OTH REF: 008

MS
Card 2/2

L-04899-67 EMT(d)/EXT(1) IJP(c) 08/09/66
ACC NR: AT6022677 SOURCE CODE: UR/0000/66/000/000/0094/0101

AUTHOR: Shubin, A. B.

ORG: none

TITLE: Some methods of pattern recognition using threshold elements

SOURCE: Moscow. Institut avtomatiki i telemekhaniki. Samoobuchayushchiesya avtomaticheskoye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 94-101

TOPIC TAGS: pattern recognition, character recognition, threshold element

ABSTRACT: The general problem of pattern recognition is briefly discussed from a purely theoretical point of view, with attention given to the various interrelated aspects and suppositions involved. It is shown that, technically speaking, the realization of the pattern recognition problem breaks down into two sub-problems which are to some degree independent: 1) the rational selection, or organization of the selection, of the essential (to recognition) coordinates of the pattern; 2) the actual recognition of the pattern according to the coordinates selected. A symbol recognition method is described which employs certain ideas outlined by A. A. Fel'dbaum (O nekotorykh printsipakh raspoznavaniya obrazov. Sm. nastoyashchiy sbornik.). Pattern

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ACC NR: AT6022677

coordinate selection is discussed on the basis of a generalized block diagram of a recognition device using threshold elements for the segregation and recognition of local attributes in a stage between the picture coordinates and the recognition circuit. The method of scanning, the adjustment of the threshold element and the attribute discrimination process (primarily through external configuration coordinates) are discussed in detail. Several methods of attribute discrimination based on different adjustments of the attribute threshold element coefficients are proposed and comparative data based on the results of practical testing are discussed. Tests involving the recognition of very simple patterns with the system described yield entirely satisfactory results, and although study with more complex configurations has not yet been concluded here, too, encouraging data have been obtained. Orig. art. has: 6 figures.

SUB CODE: 09,06/ SUBM DATE: 02Mar66/ ORIG REF: 002

M
Card 2/2

YAKOVLEV, P.; SHUBIN, A.D., dotsent, nauchnyy rukovoditel'

Automation of production in the logging industry. Sbor. nauch.
rab. stud. Petrozav. gos. un. no.6:97-106 '62.

(MIRA 17:11)

1. Kafedra mekhanizatsii lesorazrabotok Petrozavodskogo
gosudarstvennogo universiteta.

SHUBIN, A. D.

SHUBIN, A. D. - "Investigation of the process of cross-screw debarking of round timber using dull cutters (teeth)". Leningrad, 1955. Min Higher Education USSR. Leningrad Order of Lenin Forestry Engineering Academy imeni S. M. Kirov. (Dissertation for the degree of Candidate of Technical Science).

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow

14-57-6-11655

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,
p 7 (USSR)

AUTHOR: Shubin, A. F.

TITLE: Literary Selections Suitable for Reading in Geography
Classes in the USSR (Khrestomatiya literaturnykh
proizvedeniy dlya chteniya na urokakh)

PERIODICAL: Gor'kovsk. gor. in-t usoversh. uchiteley. Gor'kiy,
1956, 151 pp, ill.

ABSTRACT: These literary selections have been prepared for
seventh and eighth classes. The idea originated with
a geography teacher in school No. 7 in the city of
Gor'kiy, who used literary extracts in his classes.
The material has been arranged in the order followed
by Secondary Schools.

Card 1/1

SHUBIN, Anatoliy Fedorovich; VASIL'YENVA, O.S., red.; PONOMAREVA, A.A., tekhn.
red.

[Readings on the geography of the U.S.S.R.; literary works for use
in lessons] Khrestomatiia po geografii SSSR; literaturnye proizve-
deniia dlia ispol'zovaniia na urokakh. Moskva, Gos. uchebno-pedagog.
izd-vo M-va prosv. RSFSR, 1957. 143 p. (MIRA 11:7)
(Geography)

SHUBIN, A. P.

8

Apatites. M. P. Fiver and A. P. Shubin. *D. N. I. I.*
 (Moscow Leningrad) 1938, 152 pp., *Khim. Referat.*
Zhur. 2, No. 1, 25(1939). - In the deposits of volcanic
 origin the concn. of the phosphates seldom occurs in com-
 mercially important quantities. The amt. of apatites
 in the Khibin deposits is estd. at 2 billion tons contg. 430
 million tons of P_2O_5 . The apatite ore after treatment in
 the Kirovsk plant gives a concentrate contg. 38.6-39.8%
 of P_2O_5 . The waste products are used as fertilizers, or
 they can be made to yield (after an addnl. flotation) a
 nephelite concentrate for the production of the oxides of
 Al, Na and P and of cement. W. R. Henn

AS 0-334 METALLURGICAL LITERATURE CLASSIFICATION

SHUBIN, A.P., personal'nyy pensioner

Relying on the active members. Zhil.-kom. khoz. 11 no.10:8 0
'61. (MIRA 15:1)

1. Chlen Kommunisticheskoy partii Sovetskogo Soyuz s 1919 goda.
(Fyatigorsk--Housing management)

S/0057/64/034/004/0611/0616

ACCESSION NR: AP4028946

AUTHOR: Shubin, A.P.

TITLE: Concerning axially symmetric flow of a perfectly conducting gas

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.4, 1964, 611-616

TOPIC TAGS: magnetohydrodynamics, compressible fluid magnetohydrodynamics, axially symmetric magnetohydrodynamic flow, isomagnetic flow

ABSTRACT: A particular type of steady axially symmetric magnetohydrodynamic flow is discussed. The fluid is assumed to be compressible and perfectly conducting, and the radial and axial components of the magnetic field and the azimuthal component of the velocity are assumed to vanish. In addition, the flow is assumed to be "isomagnetic", i.e., it is assumed that $H/\rho r$ is constant, where H is the magnetic field strength, ρ is the density and r is the distance from the axis (A.I.Morozov and L.S. Solov'yev, DAN SSSR 149, No.1, 32, 1963). Under these conditions the force on the gas is the sum of the gradient of the total pressure (hydrodynamic plus magnetic) and a radial compressive force due to stretching of the magnetic lines of force. It is shown that a class of isentropic potential flows exists. The equations of the char--

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ACCESSION NR: AP4028946

acteristics for supersonic (signal velocity) flow are derived, and these are transformed to velocity space for the case of potential flow. In the case of potential flow (but not when vorticity is present) the Alfvén velocity can become equal to the acoustic velocity on some surface. This is possible because of the presence of the radial magnetic compressive force in addition to the (total) pressure gradient. The potential is expanded in a power series about a point on a straight streamline at which the velocity is equal to the signal velocity, and the first few coefficients are found for the two cases in which the Alfvén velocity is either much greater or much less than the acoustic velocity. Thus, the (approximate) equation is derived for the surface on which the gas velocity reaches the signal velocity. "The author expresses his gratitude to A.I. Morozov for valuable discussions." Orig.art. has: 24 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 11May63

DATE ACQ: 28Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 005

OTHER: 000

Card 2/2

ACCESSION NR: AP4019240

S/0056/64/046/002/0710/0718

AUTHORS: Morozov, A. I.; Shubin, A. P.

TITLE: On the theory of electromagnetic effects in the presence of the Hall effect

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 710-718

TOPIC TAGS: Hall effect, semiconductor, solid conductor, stationary electro-magnetic process, quasistationary electromagnetic process, equilibrium current configuration, equilibrium field configuration, oscillating current structure, damping length, skin effect

ABSTRACT: In view of the fact that the manifestations of the Hall effect in a plasma are made complicated by many factors, the authors analyze the specific role of the Hall effect, using as an example a homogeneous solid medium with constant carrier conductivity and concentration. Both stationary and quasistationary electromagnetic

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ACCESSION NR: AP4019240

processes in the medium are considered. The cases include direct current (planar and axially-symmetrical flow), nonlinear quasistationary fields, and plane linear waves in the presence of direct current in the medium. It is found that: (1) Only equilibrium field and current configurations can exist for a long time in a medium with a strongly pronounced Hall effect and high conductivity. (2) If the geometry of the conductor with strongly pronounced Hall effect and high conductivity does not permit the formation of an equilibrium configuration, then the current flowing in the conductor oscillates strongly over the cross section. The possibility that the current is nonstationary cannot be excluded. (3) The damping length of the electromagnetic waves can greatly differ from the ordinary skin-layer thickness. The larger the conductivity of the medium, the larger the damping length. The wave then propagates through the medium with a velocity on the order of the carrier velocity (or carrier effective velocity). "The authors are grateful to L. S. Solov'yev for interest in the work and for remarks."

Card 2/3

ACCESSION NR: AP4019240

Orig. art. has: 48 formulas and 6 figures.

ASSOCIATION: None

SUBMITTED: 18Jul63

DATE ACQ: 27Mar64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 007

Card 3/3

L 40933-65 EWP(m)/EPR/EWG(v)/EPA(w)-2/EWT(l)/EEC(t)/T-2/EPA(sp)-2/EWA(m)-2 Pd-1/
Pe-5/Pi-4/Ps-4/Pab-10 IJP(c)

ACCESSION NR: AP5007281

S/0057/65/035/003/0405/0409

AUTHOR: Shubin, A.P.

61
60
B

TITLE: On the behavior of an axially symmetric flow of a perfectly conducting gas near the vertex of an angle 21

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.3, 1965. 405-409

TOPIC TAGS: magnetohydrodynamics, perfect gas flow, axisymmetric flow, axisymmetric nozzle

ABSTRACT: The author discusses the axially symmetric isentropic isomagnetic axially symmetric potential flow of a perfectly conducting gas in a channel of the shape obtained by rotating the profile shown in the Enclosure about the dash-dot line (axis). The flow is considered only in the immediate vicinity of the angle, i.e., for small values of r/R (see the figure). The azimuthal component of the velocity and all components of the magnetic field except the azimuthal are assumed to vanish. If either the ratio of the specific heats is 2 or the magnetic field is large, the flow is approximated by the usual Prandtl-Meyer flow. The correction terms of order r/R_0 for the case of strong magnetic field and supersonic flow are obtained

Card 1/2

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ACCESSION NR: AP5007281

by a perturbation method that can also be employed to calculate the higher order terms. The effects of gas viscosity and the infinite current density at the vertex of the angle are discussed briefly, and it is concluded that the solution obtained is applicable to the case of a channel with perfectly conducting walls. "In conclusion, the author thanks A.I.Morozov for valuable discussions." Orig.art.has: 34 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 07Jun64

ENCL: 01

SUB CODE: ME,EM

NR REF SOV: 002

OTHER: 000

Card 2/3

L 11906-66 EWT(1)/ETC(F)/EPF(n)=2/EWG(m) IJP(g) AT
 ACC NR: AP6001905 UR/0294/65/003/006/0827/0837 83
 AUTHOR: ⁹⁷Morozov, A.I. (Moscow); ⁴⁴Shubin, A. P. (Moscow) 80
 ORG: None 83
 TITLE: Flow of a plasma between electrodes with weak longitudinal conductivity
 SOURCE: Teplofizika vysokikh temperatur, v.3, no.6, 1965, 827-837
 TOPIC TAGS: heat conductivity, magnetic field, Hall effect, electric field, electrode
 ABSTRACT: The article considers the steady-state nonviscous plane flow of a highly conducting plasma in a narrow channel under the effect of a transverse magnetic field and in the presence of the Hall effect. The presence of the Hall effect leads to the appearance of a component of the electric field directed along the flow. In the calculations, the walls of the channel are considered to be the electrodes between which the flow passes. If the electrodes are divided into infinitely thin layers, no condition is posed for E_t on the surface of the electrodes. If the electrodes are metallic and are not divided into layers, the following condition must be satisfied on their surface: 2/ 4/ 5
 Card 1/2 UDC: 538.4 2

L 11906-66

ACC NR: AP6001905

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$$E_t = 0. \quad (1.1)$$

Calculation of flow with the above boundary condition leads to great difficulties, since it is a question of the solution of a non-linear two-dimensional problem. Therefore, in this article, the case is simplified by assuming that although the electrodes are divided into layers, there is short-circuiting across sufficiently large resistances between sections. "In conclusion, we wish to thank V.I. Tokatl' for fruitful discussion of questions touching on the work." Orig. art. has: 80 formulas and 3 figures.

SUB CODE: 20/ SUBM DATE: 03Jul64/ ORIG REF: 001/ OTH REF: 001

30
Card 2/2

SHUBIN, A.F.

Pictures by Russian artists as visual aids for geography classes.
Geog. v shkole 22 no.1:50-54 Ja-F '59. (MIRA 12:4)
(Geography--Study and teaching--Audio-visual aids)

SHUBIN, A.S.; NOVAKOVSKIY, V.M.

Properties and application of ionite diaphragms. [Trudy]
UNIKHIM no.9:136-163 '61. (MIRA 15:12)
(Electrolysis--Equipment and supplies)
(Water--Electrolysis)

SHUBIN, A.S.; SMIRNOVA, L.M.; NOVAKOVSKIY, V.M.

Electro-ionite method of purifying waste waters from plants
manufacturing chromium compounds. [Trudy] UNIKHIM
no.9:164-180 '61. (MIRA 15:12)
(Water--Electrolysis)

SHUBIN, A.S.; SMIRNOVA, L.M.; Primala uchastiye , TKACH, V.M.

Use of ion exchange diaphragms for the purification of waste waters
from plants manufacturing fluorine compounds. Zhur.VKHO 6 no.4:
474-475 '61. (MIRA 14:7)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut.
(Sewage--Purification) (Ion exchange)

SHUBIN, A.S.; TKACH, V.M.; NOVAKOVSKIY, V.M.

Use of ion-exchange materials for the removal of hexavalent chromium compounds from waste waters. Zhur.VKHO 7 no.1:113-114 '62. (MIRA 15:3)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut. (Sewage--Purification) (Chromium compounds)

SHUBIN, A.S.

[Studies in the process of convective drying by the radioactive isotope method; abstract of a dissertation submitted for the degree of candidate of technical sciences] Issledovanie metodom radioaktivnykh izotopov protsessu konvektivnoi sushki; avtoreferat dissertatsii, predstavlennoi na soiskanie uchenoi stepeni kandidata tekhnicheskikh nauk. Moskva, Moskovskii tekhn. institut pishchevoi promyshl., 1956. 15 p. (MLRA 10:1)

(Radioisotopes--Industrial applications) (Drying)

SHUBIN, A. S.

SHUBIN, A. S.: "The use of radioactive isotopes to investigate the process of convective drying." Min Higher Education USSR. Moscow Technological Inst of the Food Industry. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Sciences)

Knizhnaya letopis', No 39, 1956, Moscow.

SHUBIN, A.S.; VEYNIK , A.I., professor, doktor tekhnicheskikh nauk, redaktor

[The use of radioactive isotopes in studies of the process of convection drying] Issledovanie metodom radioaktivnykh izotopov protsesssa konvektivnoi sushki. Pod obshchei red. A.I. Veinika. Moskva, M-vo vysshego obrazovaniia, 1957. 19 p. (MLRA 10:5)

1. Chlen-korrespondent AN BSSR. (for Veynika)
(Radioisotopes--Industrial applications)
(Drying apparatus--Food)

SHUBIN, A.S.

✓ 15319

NEW TECHNIQUES FOR INVESTIGATING THE PROCESS OF DRYING. A. S. Shubin (Technological Food Inst., Moscow, U.S.S.R.). Intern. J. Appl. Radiation Isotopes 2, 110-18(1957).

An attempt has been made to use radioactive tracers for a study of the drying-process mechanism. Two methods have been suggested for experimental investigation of the phase transition of moisture in the process of drying—a stationary and a non-stationary method. The influence of various parameters on the value of the phase-transition criterion was established experimentally by means of the two methods. An equation has been deduced allowing to compute the intensity of internal evaporation in any layer of the material. (auth)

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1. prof
1. 9/11/57

pmk

~~SHUBIN, A.S.~~
VEYNIK, A.I.; SHUBIN, A.S.

Using the tracer technique for studying phase transformations
of moisture in the process of drying. Trudy MTIPP no.8:110-114
'57. (MIRA 10:12)

(Drying)

SHUBIN, A.S.

Mechanism of substance transfer within the material in the process
of convective drying. Trudy MTIPP no.8:115-124 '57. (MIRA 10:12)
(Drying)

SHUBIN, A.S.

Mechanism of the internal evaporation of moisture during drying.
Trudy MTIPP no.9:91-99 '57. (MIRA 10:12)
(Grain--Drying) (Evaporation)

SHUBIN, A.S.

10(4); 21(5); 24(8) PHASE I BOOK EXPLOITATION SOV/2457

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniya v narodnom khozyaystve i nauke. 2d. Moscow, 1957

Teplotekhnika i gidrodinamika; trudy konferentsii, tom 4 (Heat Engineering and Hydrodynamics); Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science. No. 4. Moscow, Gosenergoizdat, 1958. 88 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR, and USSR. Glavnoye upravleniye po ispol'zovaniyu atomnoy energii.

Eds.: M. A. Styrkovich (Resp. Ed.), G. Ye. Kholodovskiy, and M. S. Pechenko, Ed. of Publ. House: L. N. Sineil'nikova; Tech. Ed.: M. I. Boranov.

PURPOSE: This collection of articles is intended for scientists and laboratory workers concerned with the use of radioactive and stable isotopes.

COVERAGE: This collection of papers deals with the application of radioactive and stable isotopes as measuring tools in various types of scientific investigation. No personalities are mentioned. References are given after some of the articles.

- 2. Bartolomey, G. G., Ya. G. Vinokur, V. A. Kolokol'tsev, and V. I. Fyudngel. Use of Gamma Rays for Studying the Process of Diffusion 9
- 3. Kurateladze, S. S., and V. N. Moakvichava. Use of Gamma Radioisotopes for Studying the Hydrodynamics of a Multifluid System 12
- 4. Pletavkin, P. G., and N. A. Shapkin. Method of "Tagged" Atoms for Investigating Water and Steam Content in Surface Boiling of a Fluid 16
- 5. Kudryavtsev, V. S. Determining the Specific Surface Area of Quartz and Cement Powders by the Sorption Method with the Use of "Tagged" Atoms 20
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- 7. Tsvetovskiy, N. A., V. I. Ponomarev, and V. A. Lukin. Methods for Determining the Density and Moisture Content of Soils with the Aid of Radioactive Emissions 33
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- 9. Strykovskiy, M. A., I. Kh. Khaybullin, and L. K. Kozhlov. Use of Radioactive Isotopes for Investigating the Solubility of Salts in Water Vapor at High Pressures 41
- 10. Skerem, L. S., A. Ya. Antony, and A. V. Sumov. Investigation of the Characteristics of Vapor at a Pressure of 185 abs. atm. with the Aid of Radioactive Isotopes 46
- 11. Dubrovskiy, V. A. Use of Radioactive Isotopes for Observing the Motion of the Molten Glass Mass in Glass Furnace Tanks 52
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- 14. Bogits, M. A., M. S. Zarubin, V. S. Kaminsky, and L. I. Korshak. Investigation of the Hydrodynamics of a Fluid in the Central Motor of a Settling Centrifuge with the Aid of Radioactive Isotopes 67
- 15. Volynskiy, M. P., N. V. Churayev, and B. Ya. Minkov. Investigations of the Motion of Water in Test Under Laboratory and Field Conditions with the Use of Radioactive Isotopes 72
- 16. Arzhantseva, M. M. Use of Radioactive Isotopes for Investigating Suspensions of River Silt 78
- 17. Kozlov, A. I., and A. S. Shubin. Use of Radioactive Isotopes for Investigating the Mechanism of the Drying Process 85

FERTSOVSKIY, Yevgeniy Solomonovich; SHUBIN, Anatoliy Stepanovich;
RACHINSKIY, V.V., prof., retsenzent; KARDASHEV, A.V.,
kand. tekhn.nauk, retsenzent; YERMOKHINA, N.V., red.

[Use of atomic energy in the food industry] Primenenie
atomnoi energii v pishchevoi promyshlennosti. Moskva,
Pishchevaia promyshlennost', 1964. 398 p.
(MIRA 18:3)

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BOOK EXPLOITATION

UR/

Pertsovskiy, Yevgeniy Solomonovich; Shubin, Anatoliy Stepanovich

Application of atomic energy in the food industry (Primeneniye atomnoy energii v pishchevoy promyshlennosti) Moscow, Izd-vo "Pishchevaya Promyshlennost'", 1964. 398 p. illus., biblio., append. 1400 copies printed. Reviewers: Prof. V. V. Rachinskiy, Cand. of Tech. Sciences A. V. Kardashev; Editor: N. V. Yermokhina; Technical editor: A. M. Satarova; Proofreaders: N. A. Yastrebova, G. M. Ivanova.

TOPIC TAGS: atomic energy, food industry, nuclear radiation, nuclear reactor, radiation detection, radiation protection, radiometry, radioactive indicator

PURPOSE AND COVERAGE: This book has been authorized by the Ministry of Higher and Secondary Special Education of the R.S.F.S.R. as a textbook for vuzes in the food industry. Basic concepts concerning nuclear radiation and methods of recording it are outlined. Instruments for measuring radiation intensity, dosage and methods of protection against radiation, nuclear reactors, and the application of radioactive indicators in the food industry are described. The application of high-power radiation sources and the utilization of radiation for the control of industrial processes in the food industry are analyzed in detail. Soviet scien-

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UDC: 664.0:621.039

AM5015050

tists I. A. Kurchatov, A. F. Joffe, M. A. Leontovich, L. D. Landau, I. Ye. Tamm, V. I. Veksler, and A. I. Alikhanov are noted as having contributed greatly to the development of the science of atomic energy and of methods for its peaceful application.

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- Ch. II. Recording nuclear radiation - - 49
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Literature -- 385
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SUB CODE: 06, 18 /SUBM DATE: 13Nov64 /SOV REF: 150 /OTH REF: 053

Card 3/3

GRIGOR'YEVA, Tat'yana Andreyevna; SHUBIN, A.S., redaktor; SACHEVA, A.I.,
tekhnicheskiiy redaktor

[Innervation of the blood vessels] Innervatsiia krovenosnykh sosudov.
Moskva, Gos. izd-vo med. lit-ry, 1954. 373 p. (MLRA 8:3)
(Blood vessels--Innervation)

GRACHEVA, Magdalena Sergeyevna; SHUBIN, A.S., redaktor; ROMANOVA, Z.A.,
tekhnicheskii redaktor

[Morphology and functional significance of innervation of the
larynx] Morfologiya i funktsional'nyoe znachenie nervnogo apparata
gortani. Moskva, Gos. izd-vo med. lit-ry, 1956. 161 p. (MLRA 9:10)
(LARYNX--INNERVATION)

SHUBIN, A.S.

USSR/Microbiology. General Microbiology.

F-1

Abs Jour: Ref. Zhur.-Biol., No 7, 1958, 28834.

Author : Kolmykova, V.N., Shubin, A.S.

Inst : Not given.

Title : Electron-Microscopy of Acid-Resistant Bacteria.

Orig Pub: Elektronnaya mikroskopiya kisloutopornykh bakteriy.
Labor. delo, 1956, No 5, 8-10.

Abstract: With the aid of the electron-microscope a study was conducted on morphology of cells of 2-3 week-old freshly isolated tubercle bacilli and 4-7 day-old cultures of the following acid-resistant saprophytes: Rabinovich and Friedman mycobacteria, cultures No. 225 and 227 isolated from scrapings of the inner surface of water faucets, and culture No. 228 isolated from humans.

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14

USSR/Microbiology.General Microbiology.

F-1

Abs Jour: Ref. Zhur-Biol., No 7, 1958, 28834.

Tubercle bacilli have the shape of bent rods with rounded tips $1.18 - 2.13 \mu$ in length, $0.43 - 0.7 \mu$ in width. The thickness of rods varies. In the cells with polar arrangement, impervious granules were found or groups of granules, cytoplasm density varied, sheathing $0.035 - 0.065 \mu$ thick and shown clearly.

Acid-resistant saprophytes are characterized by their great variability of rod forms: in the same culture are frequently found straight, bent and coccal forms. Cell tips are rounded. Their cytoplasm is denser than that of tubercle rods. Sheathing does not show. Granules frequently are bipolar; however, the granules are sometimes arranged also along the longitudinal

Card : 2/3

cell axis. Vacuoles are found in the cytoplasm of

SHUEIN, A. S.

"Electron Microscope Examinations of the Virus-like Bodies in Malignant Tumors in Human Beings."

paper submitted for presentation at Fourth Int'l. Conference on Electron Microscopy, Berlin, GFR, 10-17 Sep 58.

Institute of Experimental Pathology and Therapy of Cancer, Moscow. <

C-3,800,829, 25 Jul 58.

PISKUNOVA, G.A.; SHUBIN, A.S.

Chick embryo culture of virus-like formations from human gastric polypi. Vop.onk. 4 no.1:3-11 '58. (MIRA 11:4)

1. Iz otdela etnologii opykholey (zav. - deystv. chlen AMN SSSR prof. A.D.Timofeyevskiy) Instituta eksperimental'noy patologii i terapii raka AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. N.N.Blokhin). Adres avtorov: Moskva, 3-ya Meshchanskaya d.61/2, korp.9.

(POLYPI,

stomach, isolation & cultivation in chick embryo of virus-like form. (Rus))

(STOMACH NEOPLASMS,

polypi, isolation & cultivation in chick embryo of virus-like form. (Rus))

(VIRUSES,

virus-like form. in human polypi of stomach, isolation & cultivation in chick embryo (Rus))

SHUBIN, A.S. (Moskva, K-6, Vorotnikovskiy per., d.7/9, kv.20); TIKHOMIROVA,
T.I. (Moskva, 3-ya Meshchanskaya, d.61/2, korp.9)

Electron microscopy of ultrathin sections of tissue of breast
cancer in mice of the C-3NA line and of sarcoma 45 in rats.
Vop.onk. 5 no.11:573-578 '59. (MIRA 14:7)

1. Otdel etiologii opukholey (rukovoditel' - deystvitel'nyy chlen
AMN SSSR prof. A.D.Timofeyevskiy) Instituta eksperimental'noy i
klinicheskoy onkologii (dir. - chlen-korrespondent AMN SSSR
prof. N.N.Blokhin).

(CANCER)

(ELECTRON MICROSCOPY)

PISKUNOVA, G.A.; SHUBIN, A.S.; KOLMYKOVA, V.N.

Method for a virological examination of the blood of leucosis patients.
Lab.delo 6 no.6:12-18 N-D '60. (MIRA 13:11)

1. Otdel etiologii opukholey (zav. - deystvitel'nyy chlen AMN SSSR
Prof. A.D.Timofeyevskiy) Instituta eksperimental'noy i klinicheskoy
onkologii AMN SSSR.

(LEUKEMIA)

(ANTIGENS AND ANTIBODIES)

SHUBIN, A.S.

Detection of a virus in ultrathin sections of some tumor cells
using the electron microscope. Vop.virus 7 no.4:112-113 J1-Ag
'62. (MIRA 15:8)

1. Otdel etiologii i patogeneza opukholey Instituta eksperimental'-
noy i klinicheskoy onkologii AMN SSSR, Moskva.
(ELECTRON MICROSCOPY) (TUMORS) (VIRUSES)

SHUBIN, A.S.; NADGORNAYA, N.I.; MAZURENKO, N.P.

Electron microscopy of the mouse hemocytoblastosis-reticulosis virus. Vop. virus. 9 no.6:720-722 N-D '64.

(MIRA 18:11)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR, Moskva, i Institut epidemiologii i mikrobiologii, Kiyev.

SHUBIN, A.S.; MAZURENKO, N.P.; NIKITINA, A.S.

Electron microscopy of Mazurenko virus in tissues of leukemic rats. Neoplasma (Bratisl) 12 no.3:261-264 '65.

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR, Moskva, SSSR.

SHUBIN, A.S., [unclear], [unclear].

Electron microscopic study of the thymus cell ultrastructure in mice of the CF7BR line in irradiation-induced leukemia. Biol. eksp. biol. i med. 60 no.8:110-111 Ag '65. (MIRA 13:9)

1. Laboratoriya elektronnoy mikroskopii (zav. kand. med. nauk A.S. Shubin) i laboratoriya luchevykh faktorov kancerogeneza (zav. prof. N.V. Svyatukhin) otzela po izucheniyu kancerogennykh agentov (zav. deystvitel'nyy chlen AN SSSR prof. I.M. Shelud) Instituta eksperimental'noy i klinicheskoy onkologii (dir. deystvitel'nyy chlen AN SSSR prof. N.N. Blokhin) AN SSSR, Moskva.

SHUBIN, A. Ye.

Shubin, A. Ye.

"Tsigay sheep of Moldavia and methods of improving them." Min Higher Education. Leningrad Agricultural Inst. Leninrad, 1956. (Dissertation for the Degree of Candidate in Agricultural Sciences.)

Knizhna Letonis'
No. 25, 1956. Moscow.

POZDNYAKOV, Mikhail Mikhaylovich,; SHUBIN, Aleksandr Yefimovich

[Sheep breeding in the southwest] Ovtsevodstvo severo-zapadnoi zony. Moskva, Gos. izd-vo selkhoz lit-ry, 1958. 127 p. (MIRA 11:11)
(Sheep)

USSR / Farm Animals. Small Horned Stock.

Q-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54792.

Author : Shubin, A. Ye.

Inst : Not given.

Title : Meat-Wool Sheepbreeding in the Northwest Zone.

Orig Pub: Ovtsevodstvo, 1958, No 1, 11-13.

Abstract: No abstract.

Card 1/1

44

SHUBIN, A.Ye., kand.sel'skokhozyaystvennykh nauk, starshiy nauchnyy
sotrudnik; ZHUKOV, V.I., starshiy laborant

Fattening and supplementary feeding of Ramanov lambs. Zhivotnovod-
stvo.21 no.6:62-63 Je '59. (MIRA 12:8)

1. Severo-Zapadnyy nauchno-issledovatel'skiy institut sel'skogo
khozyaystva.
(Lambs--Feeding and feeding stuffs)

SHUBIN, B., vrach

George is going to live. Rabotnitsa 36 no. 6:24-25 Je '58.

(MIRA 11:8)

1. Braynskaya zheleznodorozhnoy bol'nitsy.
(POLIOMYELITIS)

SHUBIN, B.A.; PAZUKHIN, V.A.

Formation of primary molten salts and titanium crusts in re-
ducing $TiCl_4$ by sodium. TSvet.met. 31 no.12:44-50 D '58.
(MIRA 11:12)

(Titanium chlorides) (Reduction, Chemical)

RYABICHSKIY, Ya.I., inzh.; SHUBIN, B.A., inzh.

Introducing automatic control of water pumping stations
for the drainage of mining areas and open pits. *Shakht.stroi.*
4 no.7:14-17 J1 '60. (MIRA 13:7)

1. Giprougleavtomatizatsiya.
(Mine drainage) (Automatic control)

SHUBIN, B.F., inzh.

Automatic switching-in of condenser discharge resistors.
Energetik 10 no.9:24-25 S '62. (MIRA 17:1)

SHUBIN, B.M.; FUTORYAN, Ye.S.

Physician's tactics in the diagnosis of mechanical jaundice. Sov. med.
27 no.11:11-14 N '64. (MIRA 18:7)

1. I-ye khirurgicheskoye otdeleniye Gorodskoy bol'nitsy No.62 (glavnyy
khirurg - kand. med. nauk G.M.Polonskiy, glavnyy vrach V.D.Margolin),
Moskva.

FUTORYAN, Ye.S.; SHUBIN, B.M.

Anatomicotopographic basis of the approach to the right
intrahepatic duct and cholangiocholecystogastrostomy.
Khirurgiia 39 no.10:37-44 O '63. (MIRA 17:9)

1. Iz 1-go khirurgicheskogo otdeleniya (zav.- kand. med. nauk
G.M. Polonskiy) Gorodskoy bol'nitsy No.62 (glavnyy vrach V.D.
Margolin).

OKULOV, Igor' Borisovich, inzh.; SHUBIN, Boris Minich, inzh.; Prinsipala
uchastiye GVOZDEVA, Z.P., inzh.; MARGOLIN, P.A., inzh.,
retsensent; BELOBORODOVA, O.S., inzh., retsensent; DUGINA, N.A.,
tekh. red.

[Electroplating] Gal'vanicheskie pokrytiia. Moskva, Mashgiz,
1962. 176 p. (MIRA 16:2)

(Electroplating)

POLONSKIY, G.M., kand. med. nauk; FUTORYAN, Ye.S.; SHUBIN, B.M.;
KIRYUKHIN, V.P.

Two cases of cancer of the extrahepatic bile ducts. Khirurgiia
41 no.4:133-134 Ap '65. (MIRA 18:5)

1. 1-ye khirurgicheskoye otdeleniye Gorodskoy bol'nitsy No.62
(glavnyy khirurg - kand. med. nauk G.M. Polonskiy), Krasnogorsk.

SHUREN, P.M.; DAYOVA, N.M.

Biological characteristics of meadow tussock and blue hybrid
alfalfa grown on coal ashes in experiment pots. Zap. Sverd.
otd. VBI no.3:121-127 '64 (MIRA 18:2)

TARCHEVSKIY, V.V.; SHUBIN, F.M.

Covering ash dumps of electric power stations with plants.
Zap. Sverd. otd. VBO no.2:139-143 '62. (MIRA 16:8)

SHUBIN, G.

For high labor productivity. NTO no.9:11 S '59.
(MIRA 13:1)

1. Uchenyy sekretar' pervichnoy organizatsii Nauchno-tekhniche-
skogo obshchestva metallurgicheskogo zavoda, Sverdlovsk.
(Sverdlovsk--Efficiency, Industrial)

SHUBIN, G., starshiy inzhener aviatsii spetsial'nogo primeneniya (Barnaul)

Interesting experiments. Grazhd. av. 19 no.4:21 Ap '62.
(MIRA 15:5)

(Aeronautics in agriculture)

OZDOYEV, V., inzh.; SHUBIN, G., inzh.

Above sugar-beet plantations. Grazhd.av. 20 no.7:29 JI '63.
(MIRA 16:9)

1. Podrazdeleniye aviatsii spetsial'nogo primeneniya, g. Barnaul.
(Aeronautics in agriculture)

KNORRE, Ye.P.; SHUBIN, G.G.

Determining the age of moose. Trudy Pech.-Il.gos.zap. no.7:123-132
'59. (MIRA 15:5)

(Moose--Age)

SHUBIN, G.G.; YAZAN, Yu.P.

Organization and management of a moose farm. Trudy Pech.-II.
gos.zap. no.7:213-240 '59. (MIRA 15:5)
(Pechoro-Ilych Preserve--Moose)

SHUBIN, G.I.

Semiautomatic machine for grinding spring ends. Mashinostroitel'
no.11:4 N '64 (MIRA 18:2)

SHUBIN, G.I., kand. tekhn. nauk

In the Vorkh-Isetsk Metallurgical plant. Stal' 18 no. 6:559-560
Je '58.

(MIRA 11:7)

(Sverdlovsk--Metallurgical research)

SHUBIN, G.N.

DECEASED
C'1961

1962/
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SEE ILL.

METALLURGY

SHUBIN, G.P., starshiy inzh.

Aerial method in the chemical control of the suslik *Citellus*
erythrognus. Zashch. rast. ot vred. i bol. 6 no.3:10-11 Mr
'61. (MIRA 15:6)

1. Grazhdanskiy vozdushnyy flot.
(Altai Territory--Susliks)
(Rodent control)

SHUBIN, G. S.

"The features and the calculation of the duration of intensive drying processes."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Moscow Wood Technology Inst.

L 28864-66 EWP(k)/EWT(m)/I/EWP(v)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6011538

(N)

SOURCE CODE: UR/0135/66/000/004/0031/0033

AUTHOR: Shapiro, I. S. (Candidate of technical sciences); Beyder, B. D. (Engineer); Lepp, V. R. (Engineer); Shubin, G. S. (Engineer); Samokhin, O. G. (Technician); Rozhnov, V. S. (Technician)

71
70
B

ORG: none

TITLE: Gas-electric arc cutting of aluminum alloys up to 250 mm thick

SOURCE: Svarochnoye proizvodstvo, no. 4, 1966, 31-33

TOPIC TAGS: ¹⁴metal cutting, metal cutting machine tool, gas cutting, cutting tool, rectilinear cutting machine, rectifier, metal plate cutting apparatus, flame cutting, aluminum alloy, electric arc, hydrogen / PPR-1 cutting tool, OPR-1 cutting tool

ABSTRACT: So far the maximum thickness of aluminum alloys cut industrially by the gas-electric arc method has been 70 mm. Further technical progress dictates the need to enlarge this maximum. In this connection, the authors investigated the possibility of cutting Al alloys up to 250 mm thick by the gas-electric arc method and developing efficient equipment and techniques for this purpose. AN IP-150/250M rectifier developed by the authors was used as the power source for the cutting arc and the cutting was performed with the aid of an PPR-1 semiautomatic rectilinear cutting machine.

Card 1/2

UDC: 621.791.945.55:669.715

L 28864-66

ACC NR: AP6011538

Slabs of the Al alloys AMg6 and D6 and avial-type alloys 70-250 mm thick were cut. A major factor in cutting metal plate is the so-called "piercing time" (time from the instant of ignition of the cutting arc until complete melting of the spot at which the arc is first applied): the shorter the piercing time is, the faster the cutting rate; this involves a certain (optimal) rate of hydrogen consumption for a specified thickness of metal. It was found that the optimal consumption of H₂ increases with increasing thickness of the metal being cut owing to the attendant increase in the length of the cutting arc and hence also in the amount of the hydrogen dissociated. Another factor to be considered is the optimal angle of approach of the electric arc to the line of planned cut and the subsequent rate of advance of the cutting head. Oscillographic studies of the change in cutting-arc voltage following contact with metal showed that then a linear increase in voltage takes place. This made it possible to develop a special servo system functionally -- through feedback -- relating the cutting rate to the arc voltage as based on the use of a cutting head powered by a DC motor whose armature is connected to a power system via an MU magnetic amplifier with self-magnetization and internal positive current feedback, which adjusts the motor RPM to an extent corresponding to the required rate of advance of the cutting head as function of the operation performed at the moment (no load, ignition, approach to planned line of cut, actual cutting). On this basis the OPR-1 plate-metal cutting apparatus for rectilinear as well as profile cutting has been developed; it is equipped with a special extensible panel for remote control of the operations if desired. Orig. art. has: 5 figures, 1 table.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 003

Card 2/2 *ce*

OSADCHEV, Vasiliy Georgiyevich, kand. tekhn. nauk; IVANKOV, Petr Timofeyevich; LOTSMANOVA, Platonida Nikolayevna; SOKOLOV, Tikhon Davydovich; SHUBIN, Grigoriy Solomonovich; BASKAKOV, Ye.D., red.; SVETLAYEVA, A.S., red. izd-va; VDOVINA, V.M., tekhn. red.

[Handbook on woodwork and the processing of wood; for workers in shops manufacturing consumer goods] Spravochnik po obrabotke i pererabotke drevesiny; dlia rabotnikov tsekhov shirpotreba. 2., perer. izd. Moskva, Goslesbumizdat, 1961. 371 p. (MIRA 15:2)

(Woodwork)

(Wood-using industries)

SHUBIN, G.S.

"Experimental Investigation of Heat and Mass Transfer at High
Temperature Convective Drying of Flat Wood Materials."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

SHUBIN, G.S.

General method of calculating the duration of high-temperature
drying of lumber. Der. prom. 13 no.3:5-9 Mr'64 (MIRA 17:7)

1. Moskovskiy lesotekhnicheskiy institut.

SHUBIN, G.V., Cand Geo Min Sci -- (diss) "Geology and
~~genesis~~ genesis of iron ore deposits of the Krasnokamensk^dya
group." Tomsk, 1958, 13 pp (Min of Higher Education USSR.
Tomsk Order of Labor Red Banner Polytechnic Inst im
S.M. Kirov) 100 copies (KL, 29-58, 129)

SHUBIN, G.V.

Contact-metasomatic formations in iron deposits of the Krasno-
kamenskaya group (Eastern Sayan Mountains). Izv. TPI 90:130-144
'58. (MIRA 12:2)

1. Predstavleno professorom A.M. Kuz'minym.
(Sayan Mountains—Metasomatism)

SHUBIN, G.V.

Microhardness of sodium chloride crystals. Izv.vys.ucheb.sav.;
fis. no.3:3-8 '60. (MIRA 13:7)

1. Tomskiy politekhnicheskij institut im. S.M.Kirova.
(Sodium chloride crystals)

SHUBIN, G.V.

Fragility and plastic deformations of sodium chloride. *Izv.vys.ucheb.*
zav.; fiz. no.1:98-103 '61. (MIRA 14:7)

1. Tomskiy politekhnicheskii institut imeni S.N.Kirova.
(Deformations (Mechanics)) (Salt crystals)

SHUBIN, G.V.

Diabases in the middle Kanzyba River (Eastern Sayans). Izv.vys.
ucheb.zav.;geol.i razv. 4 no.10:72-77 0 '61. (MIRA 14:12)

1. Tomskiy politekhnicheskiy institut.
(Kanzyba Valley--Diabase)

SHUBIN, G.V.

Structure of the Ilinskoye gold ore deposit. Izv.vys.ucheb.zav.;
geol. i razv. 4 no.11:68-72 N '61. (MIRA 15:2)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.
(Chita Province—Gold ores)

SHUBIN, G.V.; ANEVTSOV, A.I.

Effusive and pyroclastic formations of Grishchenskaya Mountain
in the Ilya ore zone. Trudy ZabNEI no.1:54-61 '62.

(MIRA 18:2)

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Ilinsk deposit in eastern Transbaikalia. Izv. vys. ucheb.
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(MIRA 17:10)

1. Tomskiy politekhnicheskii institut imeni Kirova.

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S/O32/62/028/004/022/026
B124/B101

AUTHORS: Bayev, L. V., Malinin, N. I., Rabotnov, Yu. K., and Shubin,
I. A.

TITLE: Device for creep and relaxation testing of plastics

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 4, 1962, 498 - 500

TEXT: A testing device based on the loading of a lever is described. The size of the plastic specimens is 55 - 100 mm length, 1 - 10 mm thickness. The load of the lever can be changed between 0 to 200 or 500 kg. An improved model of the device for breaking load up to 1500 kg was tested. The loading limits are changed by replacing the lever with 1:10 arm ratio by a lever with ratio 1:4. For relaxation tests the loading is replaced by a spring. The device can be adjusted for constant temperature. No compensation for dynamometer deformation during the relaxation test is provided. Tests of KACT-3 (KAST-V) glass-reinforced plastic show low creep (0.5% at 10 kg/cm²) along the warp, and higher creep (3% at 7 kg/cm²) at an angle of 45° to the warp. There are 3 figures. ✓


Card 1/2

Device for creep ...

S/032/62/028/004/022/026
B124/B101

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR
(Institute of General and Inorganic Chemistry of the Academy
of Sciences UkrSSR)

Card 2/2



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Volga i volzhskoe sudokhodstvo; istoriia, razvitie i sovremennoe sostoianie sudokhodstva i sudostroeniia [The Volga and Volga navigation; history, development and present state of navigation and ship-building]. Moskva, Transpechat', 1927. 908 p. illus.

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Contents. - The state of waterways, p. 16 & 32. Northern sea route, p. 76; State of road construction, p. 110; Waterway, p. 109; Air communications, p. 114, 130.

DLC: HE675,1,V6S48

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

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SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

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MALININ, N.I. (Novosibirsk); RABOTNOV, Yu.N. (Novosibirsk);
SHUBIN, I.A. (Novosibirsk)

Program-controlled machine for investigating deformations
of plastics under complexly stressed state conditions. Izv.
AN SSSR. Mekh. i mashinostr. no.6:20-24 N-D '63.

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