"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Manufacture of High-Strength Welded Hoisting Chains (Cont.) SOV/4138

There are 19 references: 7 German, 6 Soviet, 5 English and 1 Czech.

TABLE OF CONTENTS:

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

GOTOVTSEV, A.A.; ROMANOV, V.A.

Plotting optimum geometrical parameters for round-lind welded chains. Standartizatsiia 24 no.2:19-22 F '60. (MIRA 13:5)
(Chains)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

69331

S/129/60/000/05/004/023
E193/E283

18.7100

AUTHORS: Filyand, M. A., and Romanov, V. A., Candidates of Technical Sciences, Libman, N. B., Engineer and Podolinskaya, S. N., Engineer (Deceased)

TITLE: Non-Oxidizing Heating of Precision Engineering Alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 5, pp 15-18 (USSR)

ABSTRACT: The object of the investigation, described in the present paper, was to explore the possibility of providing a protective atmosphere during heat treatment of watch parts (balance springs) by using titanium hydride as the source of pure hydrogen. There are two methods of preparing titanium hydride. One consists in heating metallic titanium in hydrogen to 900°C and cooling it to room temperature in the same atmosphere. Diffusion of hydrogen, slow in the initial stages of the process, becomes quite rapid when cracks have appeared in the metal; when the saturation point has been reached, a large quantity of hydrogen becomes adsorbed on the surface of the grains, as a result of which the quantity of this gas absorbed by the metal after this treatment is

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Non-Oxidizing Heating of Precision Engineering Alloys

higher than that indicated by the stoichiometric formula of titanium hydride. In the other method, which is more economical, titanium hydride is obtained by reduction of TiO_2 with metallic hydrides such as calcium hydride. It has been postulated that the composition of titanium hydride is given by the formula $TiH_{1.75}$; the TiH_2 phase, richer in hydrogen, has face-centre cubic crystal lattice ($a = 4.48$ Å). In the absence of a conclusive proof of an existence of a hydride with the formula TiH_2, it is probable that this phase consists of $TiH_{1.75}$ with some excess of dissolved hydrogen. Titanium hydride has density of 3.912 g/cm^3, is stable at room temperature, and not hygroscopic. One volume of titanium can retain at room temperature 1800 volumes of hydrogen; on heating, most of this hydrogen is liberated, but complete liberation takes place only at relatively high temperatures (800 to 1000°C). The balance springs, whose heat treatment was the object of the present investigation, are made of two types of Elinvar alloys; a carbide-bearing alloy N35KhMV, and a precipitation-

Card 2/8 hardening alloy, N41KhTA. In the first series of

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Non-Oxidizing Heating of Precision Engineering Alloys

experiments, the heat treatment of these components was carried out at 640 to 700°C, in the protective atmospheres of town gas, dissociated ammonia, commercial grade helium, nitrogen, and hydrogen. Although all gases were passed through a drying and purifying train, they failed to prevent oxidation of the heat-treated parts. The attempts to heat-treat these components in vacuum were also unsuccessful; springs, made of alloy N35KhMV, retained their bright surface but lost some of their elasticity, evidently due to the surface layer becoming depleted of carbon; vacuum heat-treated alloy N41KhTA acquired a matt surface, most likely owing to the precipitation of titanium on the alloy surface; similar effects were observed in the case of venadium- and molybdenum-bearing alloys. In the next stage of the investigation hydrogen, obtained by dissociation of titanium hydride, was used (titanium hydride contained 0.75% impurities, including 0.05% N and 0.05% C). The

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Non-Oxidizing Heating of Precision Engineering Alloys

experiments consisted in placing the parts to be heat-treated and titanium hydride (contained in small cylindrical capsules with perforated lids) in a heat-resisting cylindrical container (700 mm long, 12 mm internal diameter), evacuating the container to approximately 10^{-5} mm Hg, sealing it off, and heating in an electric furnace to approximately 700°C, and recording the variation of pressure in the container during the first and subsequent heating cycles. The results are reproduced graphically on p 17, where the pressure in the container (kg/cm^2) is plotted against temperature (°C); graphs a and be relate to specimens in which 2 and 4 g of titanium hydride, respectively, were placed in the container; numbers ascribed to each curve denote first, second, etc., heating cycle. It will be seen that when titanium hydride is heated for the first time, no significant quantity of hydrogen is liberated until a temperature of approximately 500°C is reached, intensive evolution of hydrogen taking place at 550 to 600°C; on cooling hydrogen is re-absorbed by titanium

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Non-Oxidizing Heating of Precision Engineering Alloys

and given off again during subsequent heating. During subsequent heating, the liberation of hydrogen begins at approximately 300°C, this temperature remaining constant, irrespective of the number of the heating/cooling cycles. Regarding the protective properties of the atmosphere obtained by this method, it was found that to preserve the bright surface of the treated articles, hydrogen pressure of 3 to 4 kg/cm^2 had to be attained in the container at the heat-treatment temperature. Owing to the ability of titanium hydride to liberate hydrogen on heating, and to re-absorb it on cooling, one and the same charge of titanium hydride can be used more than once; it was established, experimentally, that 8 to 10 g titanium hydride (TiH_2) was sufficient to heat-treat 12 to 15 batches, each containing 400 balance springs. In the next series of experiments, an attempt was made to produce hydrogen by dissociation of titanium hydride, store it in a

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Non-Oxidizing Heating of Precision Engineering Alloys

cylinder under the pressure of 1.5 to 2 kg/cm^2, and then use it for heat-treatment when necessary. The parts to be heat-treated were placed in the container which was then evacuated, filled with the cylinder hydrogen, sealed off and heated to the required temperature. Although the pressure in the container at the heat-treatment temperature reached 5 to 7 kg/cm^2, the heat-treated parts became slightly oxidized. It was inferred that from this that full protection against oxidation is given only by hydrogen obtained directly from titanium hydride. It was also proved, experimentally, that when titanium hydride is used to provide the protective atmosphere, full protection against oxidation can be ensured by evacuating the container to vacuum no better than 10^{-1} mm Hg. The bright surface of the heat-treated components can be preserved even without preliminary evacuation of the container, but in this case, three times more titanium hydride have to be used to ensure favourable ratio of the partial pressure of hydrogen and water vapour which, according to the

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Non-Oxidizing Heating of Precision Engineering Alloys

equation $Fe + H_2O \rightleftarrows FeO + H_2$, should be (at 700°C) not less than 2.5. In the last stage of the present investigation, the application of titanium hydride in heat-treatment of soft magnetic alloys was studied. A trial batch of electro-mechanical filter resonators, in the form of flat plates (6 x 8.5 x 0.2 mm), made of Permendur alloy K50F2 was placed in the container, together with 6 g of titanium hydride (TiH_2). The container was evacuated to 2×10^{-2} mm Hg, heated to 850°C and after 2 h at the temperature, cooled in the furnace at the rate of 50°C/h. No evidence of oxidation was found on the parts treated in this manner, whereas the previous attempts to protect them from oxidation by annealing in high vacuum (10^{-4} mm Hg), or by using commercial grade hydrogen, proved to be unsuccessful. It was also found that titanium hydride can be used for bright annealing of Co-, Ni-, and Cr-base, precision

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E193/E283

Non-Oxidizing Heating of Precision Engineering Alloys

engineering alloys, such as permalloy, vicaloy, and others. There are 2 figures and 5 references, 4 of which are Soviet and 1 German.

ASSOCIATION: NIIChasprom

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

KRUGLIKOV, A.V., kand.tekhn.nauk; ROMANOV, V.A.; GONCHAROV, N.G., tekhn. red.

[Production of highly resistant welded traction chains; present state and prospects for its development] Proizvodstvo vysokoprochnykh svarnykh tiagovykh tsepei; sovremennoe sostoianie i perspektivy razvitiia. Moskva, 1959. 58 p. (MIRA 13:3)
(Chains) (Link belting)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

SOV/122-58-11-4/18

AUTHOR: Romanov, V.A., Engineer ("Krasnyy Proletariy" Works in Moscow)

TITLE: The First Automatic Machining Line for the Cutting of Gear Wheels (Pervaya avtomaticheskaya stanochnaya liniya dlya obrabotki shesteren)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 11, pp 16-24 (USSR)

ABSTRACT: At the Moscow Machine Tool Manufacturing Works "Krasnyy Proletariy" "Imeni A.I.Yefremova" a gear wheel automatic production line, the first in the world, was set to work in May 1958. The equipment was constructed by the "Stankokonstruktsiya" Works in Moscow with the collaboration of the following members of the ENIMS staff, Kuptsov, A., Abankin, V., Belov, V., Sitnikov, A., Arnl, E., Shcherbakov, V., Krukovets, L., Zil'bergleyt, V., Kolodnyy, Ya., and others. Development problems included the automatic adjustment of finishing cutters, chip breaking and swarf removal, increased endurance of cutting tools and the continuous maintenance of a given accuracy. Frequent re-setting of the line for different gear

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

The First Automatic Machining Line for the Cutting of Gear Wheels

sizes was an essential condition. The line is intended for the machining of all the gears in the engine and screw cutting lathe, model 1K62, namely 120,000 wheels per annum. Ten different single rim gears (sketches and main dimensions included in Table) of the second grade of accuracy and noise are in the production programme. The gears have outside diameters between 88 and 220 mm and modules between 1.75 and 4 mm. Each batch consists of 1000 components. The time for re-setting from one wheel to another is 4.5 hours. The line is serviced by 3 setters among whom the senior setter is responsible for his shift. A finished gear is produced, on the average, every 1.5 min. The blank is a pierced forging obtained in a mechanical forging press after electric or gas heating. The blank has undergone induction heat treatment and de-scaling. The originally projected finish stamping of the gear faces has not yet proved possible and they are machined in the production line. The automatic line performs machining but not flash removal, cleaning or inspection. A flash removal machine is being developed. The setters

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The First Automatic Machining Line for the Cutting of Gear Wheels

carry out selective inspection outside the production line. All the machine tools incorporated are universal semi-automatic machines. It is stated that out of the 150 million gear wheels made in the Soviet Union, one half are single rim gears between 90 and 300 mm diameter producible by an automatic line such as that described. An electric truck supplies blanks to the automatic magazine. The blanks are stacked on pins mounted on a frame which is placed under the magazine. A mechanical arm lifts a blank from the pin and thereby begins the cycle of manufacture. The lay-out of the production line in elevation (Fig.1) illustrates the longitudinal horizontal transporter of the bar type. This moves each component from the platform of the loading and unloading device of each machine to the platform of the next device. The transporter reciprocates by hydraulic power attached at the end of the line. When reciprocating, hinged flaps either slide over the components (in the reverse direction) or push the components (in the forward direction). The

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The First Automatic Machining Line for the Cutting of Gear Wheels

flaps are controlled at points where several machines work in parallel. The loading and unloading device (Fig.3) consists of a table which moves at right angles to the transporter axis. The motion consists of a trapezoidal loop, traversed clockwise in unloading and anti-clockwise in loading. The sequence of machining operations is stated in detail for the most complicated type of gear to which the line is adapted. A special cup-shaped cutting tool with a chip curler was developed by VNII to yield swarf in short coils or small bundles. A negative land of 0.2 x 30° and a zero front clearance angle yield this type of swarf in 0.4%C chromium steels of 170-217 Brinell hardness at cutting speeds of 60-240 m/min, rates of feed of 0.18 - 0.7 mm/rev and depths of cut of 0.25 - 3.5 mm. A sprung fixing of the tool held in position by the cutting forces ensures a tool replacement time of 20 seconds. Machines No.1, 2 and 4 along the line are vertical, multi-station automatic boring machines; Machine No.3 is a vertical spline broaching machine; Machines No.5, 6 and 7 are gear hobbing machines; Machine No.8 is a

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The First Automatic Machining Line for the Cutting of Gear Wheels

tooth crowning machine and Machine No.9 is a tooth shaving machine. The clamping fixtures for the components on several machines are shown in cross-section. The first four machines constitute the first section which finishes with an automatically operated magazine so that the section can operate whilst the second section is being re-set. It is claimed that the average cost of gear machining has been reduced by 12% in spite of the high cost of the first experimental/ equipment. There are 10 illustrations and 1 table.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

25(2) SOV/117-59-4-9/36

AUTHOR: Romanov, V.A., Engineer

TITLE: The Practical Utilization of Drilling Machine. (From the Experience of the "Krasnyy proletariy" Plant)

PERIODICAL: Mashinostroitel', 1959, Nr 4, pp 21-23 (USSR)

ABSTRACT: The article contains information on a special turntable added to vertical drilling machine "2135" at the author's plant. This plant is being reorganized for a 7-hour work day. At present the plant is engaged in a "Socialist competition" for revealing and utilizing the existing possibilities to shorten the workday without a cut in production, and a raise in work done per hour. The "2135" drilling machines are machining parts of the series-produced "1K62" screw-cutting lathe. The turntable (Figure 2) bears all the drilling jigs required for the drilling operations

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

The Practical Utilization of Drilling Machine. (From the Experience of the "Krasnyy proletariy" Plant)

on the '2135" machines and needs only to be turned when a drilling jig is to be replaced. Such resettings formerly took from 30 minutes to 1 hour (the drilling operation itself taking 1.5 min). The table (Figure 1) consists of two steel rings with a groove for balls, steel plates welded to the rings, and balls placed between the rings as if they were between ball bearing races. The center axle of the table is provided with two bores - for fluid from the hydraulic drive and for compressed air from the workshop air line - so that both hydraulic and pneumatic machine tool attachments can be used. There are 3 sets of diagrams and 1 photograph.

ASSOCIATION: Zavod "Krasnyy proletariy" (The "Krasnyy Proletariy" Plant)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V A.

Dissertations. Branch of Physico-Mathematical Sci. Jul-Dec 1957.
Vest. Akad. Nauk SSSR, 1958, No. 4, pp. 115-116.

At the Inst. for Problems of Physics im S. I. Vavilov. the following dissertations for the degree of Cand. Physico-Mathematical Sci. were defended:

DZYALOSHINSKIY, I. Ye. - The Thermodynamic Theory of Weak Ferromagnetism in Antiferromagnetics.

ITSKEVICH, Ye. S. - The Thermal Capacity of Layer Lattices at Low Temperatures.

At the Institute of Physics and Technics (Leningrad Phys-Tech Inst, AS USSR) the following dissertations fordegree Cand. Physico-Math Sci. were defended:

KAPLYANSKIY, A. A. - Spectroscopic Investigations in the Range of the Long Wave Edge of the Main Absorption of Crystals.

KRIVKO, N. I. - INVESTIGATION OF THE FERROMAGNETIC RESONANCE IN Some Ferrites at Low Temperatures.

ROMANOV, V. A. - The Determination of the Coefficient Relations of the Inner Conversion of γ Radiation on L and M Shells.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

21(8) SOV/56-35-5-51/56

AUTHORS: Kel'man, V. M., Metskhvarishvili, R. Ya., Preobrazhenskiy, B.K., Romanov, V. A., Tuchkevich, V. V.

TITLE: The Investigation of the Spectrum of Conversion Electrons of the Isotopes of Lutetium With Neutron Deficit (Issledovaniye spektra konversionnykh elektronov neytronodefitsitnykh izotopov lyutetsiya)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1309-1310 (USSR)

ABSTRACT: The investigation of the radiation of greatly deformed nuclei furnishes material for the further development of the collective nuclear model. It is just from this point of view that the isotopes of lutetium are of interest. Recently several papers (Refs 1-4) have been published which deal with lutetium isotopes with neutron deficit, but the data given by these papers do not convey a clear idea of the decay of these isotopes. Additional investigations are therefore necessary. The authors of the present paper investigated the conversion spectrum of the isotopes of a lutetium fraction, which had been separated from a tantalum target irradiated with fast (660 MeV) protons. The method employed for separation has already been

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

The Investigation of the Spectrum of Conversion Electrons of the Isotopes of Lutetium With Neutron Deficit

described (Ref 5). Measurements were carried out by means of a prism-β-spectrometer and by means of a double-focusing spectrometer. The spectrum of the conversion electrons consists of many lines, which belong to Lu^{169} (half-life ~1.5 days), Lu^{170} (~ 2 days), Lu^{171} (~ 8 days), Lu^{172} (~ 6.7 days), Lu^{173} (~200 days). Belonging of lines to the various corresponding isotopes was determined from the half-life. A table gives the energies of γ-transitions the conversion lines of which decrease with the period ~1.5 to 2 days. The second table contains the energies of the γ-transitions with the period 6.7 to 8 days. The energy of these transitions was determined from the energy of K- and L-conversion lines. There are 2 tables and 6 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR(Leningrad Physico-Technical Institute of the Academy of Sciences, USSR)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A., inzh.

The first automatic production line for machining gears.
Vest.mash. 38 no.11:16-24 N '58. (MIRA 11:11)

1. Moskovskiy zavod "Krasnyy proletariy."
(Gear cutting) (Automatic control)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Романов, В.А.

48-22-2-11/17

AUTHOR: Romanov, V. A.

TITLE: Precision Measurement of the Energy of Some Lines in the Spectra of Ir^{192} and $Eu^{152, 154}$ (Pretsizionnoye izmereniye energii nekotorykh liniy v spektrakh Ir^{192} i $Eu^{152, 154}$)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 2, pp. 191 - 193 (USSR)

ABSTRACT: This is a lecture held at the VII All Union Consultative Conference on Nuclear Spectroscopy. The mentioned measurements were conducted with the help of a β-prism spectrometer. The energy of the transitions 296, 308 and 316 keV (Ref 3) in the spectrum of Ir^{192} were determined by comparison of the position of these lines with the position of the lines I ($E = 222{,}22 \pm 0{,}03$ keV) and γ ($E = 234{,}61 \pm 0{,}03$ keV) of the active deposit of RaTh. The measurement of the energy of the lines was performed at a half-width of the lines of 0,04 %. The dimensions of the source were 1 x 10 mm, its surface density amounting to $\sim 0{,}48$ mg.cm^2. In order to avoid errors caused by an inaccurate adjustment of the source in the spectro-

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Precision Measurement of the Energy of Some Lines in the Spectra of Ir^{192} and $Eu^{152, 154}$

meter the RaTh was applied directly to the iridium source. The energy difference between the lines K-296 and I was found to be (4,700 ± 0,006) keV and correspondingly the distances between the lines (in the spectrum of Ir^{192}) K-308, K-316 and the line $J(M_1)$ in the spectrum of ThB amount to (4,609 ±0,005) keV and (3,447 ± 0,004) keV . By these means it was also possible to determine the energy of the corresponding K-conversion lines. A comparative table of results is given here, which were obtained by the method of photoelectron diffraction in crystals and by the method applied here. Besides, measurements were conducted of the energy differences of the conversion lines in the spectrum of Ir^{192} from the sub-shells of Pt and Os, as well as the energy differences from the K-shell of Os for the transitions with the energies of 201 and 205 keV. The results are compiled in a table. The β-spectrometer was here used for measuring the energy differences between the lines L_{II} 136,33±0,02 keV (conversion to Pt) in the spectrum of Ir^{192} (Ref 3) and the lines M_{II} 122 keV (conversion to Sm) as well as in the spectrum of $Eu^{152, 154}$ using sources of 1 x 10 mm and at a half width of 0,07 %.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Precision Measurement of the Energy of Some Lines in the Spectra of Ir^{192} and $Eu^{152, 154}$

The found energy difference of the mentioned lines was (2,739 ± 0,006 keV). Using the already existing tables on the energy ratios of electrons and of the ratios of energy differences between the L and M lines in the spectrum of $Eu^{152, 154}$ the energy of the transitions to the ground state could be determined here. Table 3 compares older to recent data on $Eu^{152, 154}$. There are 3 tables and 11 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR
(Leningrad Physics and Technology Institute, AS USSR)

AVAILABLE: Library of Congress

1. Iridium-Measurement-Theory 2. Europium-Measurement-Theory

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

Table with hydraulic control for multiple machining of parts by the method of continuous milling. Stan. i instr. 36 no.11: 37-38 N '65. (MIRA 18:11

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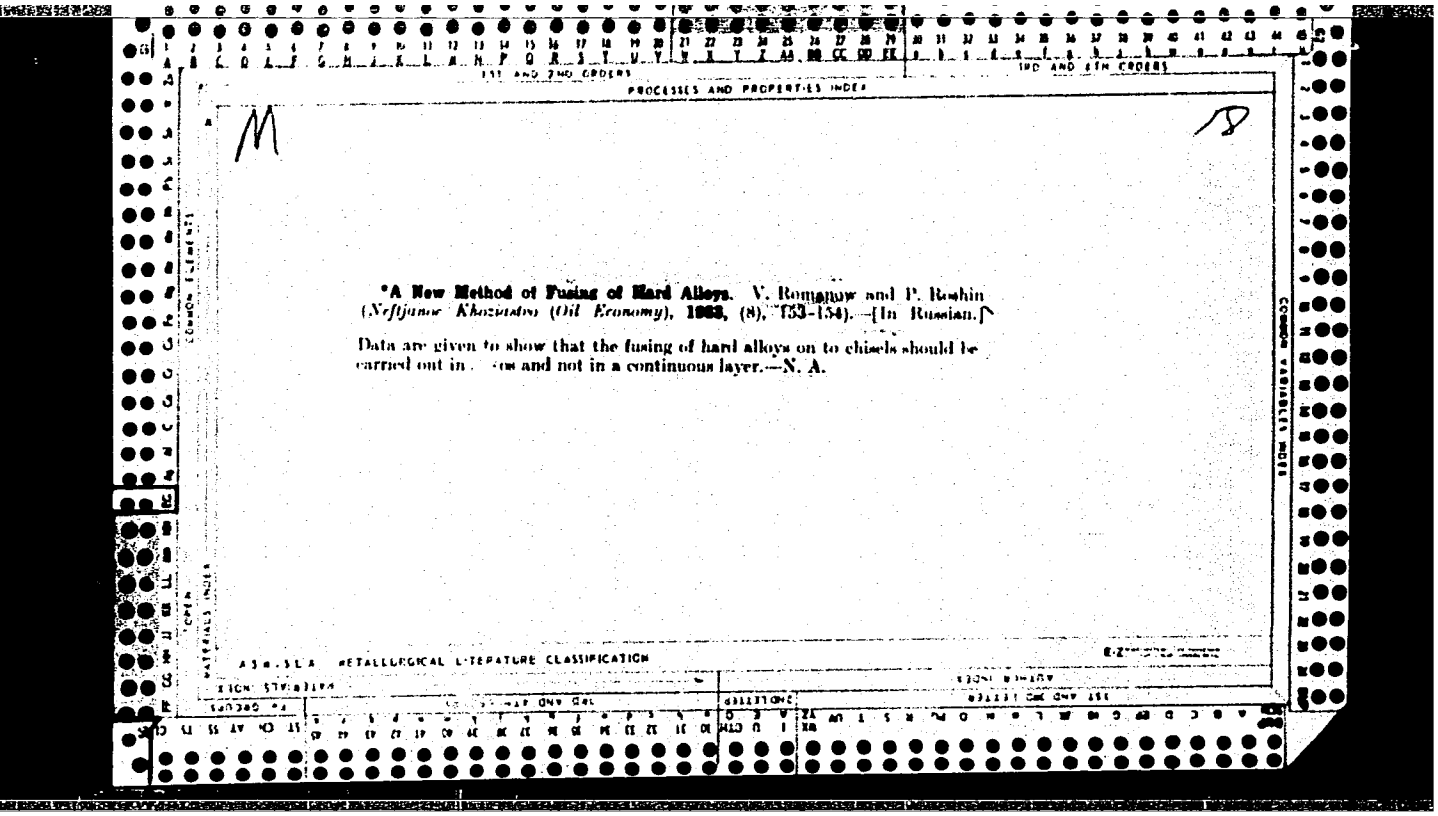

PROCESSES AND PROPERTIES INDEX

M

18

***A New Method of Fusing of Hard Alloys.** V. Romanow and P. Reshin (*Neftjanoe Khozjaistvo* (*Oil Economy*), **1933**, (8), 153–154). —[In Russian.]

Data are given to show that the fusing of hard alloys on to chisels should be carried out in [illegible] and not in a continuous layer.—N. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V. and MESHCHERIAKOV, D.

Sharovoi sverkhskorostnyi transport sistemy N.G. IAromol'chuka. /Highspeed transportation of the system introduced by N.G. IArmol'chuk/. (Elektrifikatsiia zhel-dor. transport a 1933, no. 11, p. 4-7, illus.).

DLC: TF701. E27

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

ZAGORSKIY, F.N.; ZAGORSKAYA, Ye.P.; KHARLAMOV, M.S., retsenzent; ROMANOV, V.A., inzhener, retsenzent; POLUEKTOV, Ye.V., inzhener, redaktor; TIKHONOV, A.Ya, tekhnicheskiy redaktor

[Safety engineering in rapid metal dutting] Tekhnika bezopasnosti pri skorostnom rezanii metallov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1954. 167 p. [Microfilm] (MLRA 8:4)
(Metal cutting--Safety measures)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A., kandidat tekhnicheskikh nauk; PODOLINSKAYA, S.N., kandidat tekhnicheskikh nauk.

Improving the quality of material used for hairsprings. Chas.mekh. no.1:155-164 '55. (MLRA 9:12)
(Clockmaking and watchmaking) (Springs (Mechanism))

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A., inzhener; KRYSINA, Ye.V.

Working out a classification standard for tools and attachments used in machine construction. Standartizatsiia no.2:54-56 Mr-Ap '56. (MLRA 9:5)

1. NIITAVTOPROM.

(Machine tools--Standards)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

BELYAKOV, I.S.; ROMANOV, V.A.

Structural materials used in the watch and clock industry abroad. Priborostroenie no.5:20-22 My '56. (MLRA 9:8)
(Clockmaking and watchmaking)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

LEYBOVICH, Yevgeniy Abramovich, kandidat tekhnicheskikh nauk; DEMIN, Aleksandr Vasil'yevich, inzhener; ROMANOV, Viktor Alekseyevich, inzhener; YAURE, Andrey Georgiyevich, inzhener; MELEYEV, A.S., redaktor; TIKHONOVA, Ye.A., tekhnicheskiy redaktor

[Automatic electric winches for towing] Avtomaticheskie elektricheskie buksirnye lebedki. Moskva, Izd-vo "Morskoi transport," 1957. 88 p. (MLRA 10:8)

1. TSentral'noye proyektno-konstruktorskoye byuro 4 Ministerstva Morskogo Flota (for Demin). 2. Zavod "Dinamo" (for Leybovich, Yaure) (Winches) (Towing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Romanov, V.A.

AUTHOR: Romanov, V.A., Cand. Tech. Sc.

TITLE: A Complex Speed control System for a Diesel-Generator Unit with Mechanical Speed Governor. (Sistema smeshannogo regulirovaniya skorosti dizel' agregata s mekhanicheskim regulyatorom skorosti)

PERIODICAL: Energomashinostroyeniye, 1957, No. 1, pp.20-22, U.S.S.R.).

ABSTRACT: The article gives the results of developing and testing systems of speed control for diesel units based on a combination of mechanical governor and an electrical system that reacts to changes in the electrical load. The results of investigation are given of a two-pulse system of speed control for IC engines marine and steam turbines which were carried out at the Leningrad Polytechnical Institute. It is shown that the standard type of speed governors have a number of disadvantages which can be overcome largely by applying a 2-impulse regulator which responds to the electrical load. Fig.1, p.20, shows the basic scheme for an additional regulator which responds to the load of the diesel-driven generator investigated at the Automatics and Telemechanics School

Card 1/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

TITLE: A Complex Speed control System for a Diesel-Generator Unit with Mechanical Speed Governor.

of the Leningrad Polytechnical Institute. The fundamental part of the regulator is a phase sensitive bridge fed basically with the system voltage (3-phase) and introducing into the central conductor a voltage generated by the load current. If the load is a pure reactance, the voltage drop across resistance R_1 in the neutral lead of the rectifying circuit will be shifted by 90° relative to the main voltage u_1; the resulting voltages u_3 and u_4 fed into the rectifiers will then be equal and the circuit will be in equilibrium. As soon as there is an active generator load, there will be an active component of the voltage drop across resistance R_1 and the circuit will no longer be in equilibrium and, thereby, the controls will be actuated. Fig.2, p.21, shows experimentally obtained

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

TITLE: A Complex Speed control System for a Diesel-Generator Unit with Mechanical Speed Governor.

speed recordings. Fig. 3 shows diagrammatically the execution element of the electric power regulator, and the characteristics of the electro-magnet of this element is shown in a graph. Fig. 4. Fig. 5 shows the speed recordings of the experimental regulator during the connection and disconnection of an active load. Fig. 6 shows circuit diagrams which are designed to take into account load non-symmetries. The system may be used on any prime mover. The equipment and circuit are described, and test results are given.

There are three figures, three graphs, and three references, none Slavic.

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

Comparative evaluation of modern anesthetic methods in tonsillectomies. Zhur. ush., nos. i gor. bol. 24 no.1:75-79 Ja-F '64. (MIRA 18:3)

1. Iz otorinolaringologicheskoy kliniki (zav.- zasluzhennyy deyatel' nauki prof. L.A. Lukovskiy) Dnepropetrovskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

L 47988-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJP(c)

ACCESSION NR: AP5007021 S/0120/65/000/001/0043/0049

36
AUTHOR: Romanov, V. A.; Serbinov, A. N.; Dudkin, N. I. B

TITLE: Operating experience with an EG-2,5 electrostatic accelerator 19

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 43-49

TOPIC TAGS: electrostatic accelerator / EG-2,5 accelerator

ABSTRACT: The EG-2,5 accelerator (installed in the same h-v room with an older EG-1 accelerator) was in operation for 375 hrs in Sep-Dec 1961 (debugging period), 2283 hrs in 1962, and 2850 hrs in 1963. Various faults (29 in 1962 and 30 in 1963) are tabulated; the ion source and its supply system gave the most trouble. Changes introduced into the vacuum system, electron gun, and ion source in the course of operation are briefly described. The present (Jan 1964) characteristics of the accelerator are: working voltage 1—2.5 Mv; gas-mixture pressure, 10—12 atm; the mixture components, 75—80% N_2, 25—20% CO_2, 1.5%

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

L 47088-65

ACCESSION NR: AP5007021 O

or less oxygen; mixture relative humidity, 0.5%; target current, up to 100 μa at 2 Mev or less or up to 50 μa at 2 Mev or more; energy spread of ions, 0.2%; no secondary-electron suppression was used in measuring the target currents. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 10Jan64 ENCL: 00 SUB CODE: NP, EC

NO REF SOV: 002 OTHER: 000

TP

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

Hoisting device for removing and setting heavy cam chucks.
Mashinostroitel' no.5:31 My '63. (MIRA 16:7)

(Machine shop—Practice)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

Group method for machining on rotating tables. Ratsionalizatsiia 13 no.2:25 '63.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.; KIRIYENKO, A.I.

Using herbicides for weed control in millet fields. Zemledelie 25 no.5:39-43 My '63. (MIRA 16:7)

1. Saratovskiy sel'skokhozyaystvennyy institut.
(Millet) (Weed control) (Triazine)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

SUCHILIN, Aleksandr Mikhaylovich; ROMANOV, V.A., red.

[Linear tracking systems]Lineinye slediashchie sistemy; konspekt lektsii. Leningrad, Leningr. politekhn. in-t, 1963. 117 p. (MIRA 16:12)
(Automatic control) (Servomechanisms)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V. A.

Cand Phys-Math Sci - (diss) "Some photoelectric properties of germanium." Leningrad, 1961. 10 pp; (Academy of Sciences USSR, Physics-Technology Inst imeni A. F. Ioffe); 150 copies; price not given; bibliography at end of text (11 entries); (KL, 6-61 sup, 195)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ZAK, P.S.; ZHURAVLEV, V.L.; ROMANOV, V.A., otv.red.; SADOMOV, N.T., red.; GOTOVTSEV, A.A., red.; GRINBERG, A.Ya., red.; ZUBKOV, V.T., red.; KOGAN, A.M., red.; KRUGLIKOV, A.V., red.; REBGUN, K.K., red.; NAZIMOV, N.M., red.; NEYMARK, A.M., red.; MOTYAKHOV, M.A., red.; SPEVAK, V.Ya., red.; TENENBAUM, M.M., red.; SHNEYDER, E.I., red.; AIADOVA, Ye.I., tekhn.red.; SHKLYAR, S.Ya., tekhn.red.

[Design and manufacture of globoid gears] Proektirovanie i izgotovlenie globoidnykh peredach. Moskva, Ugletekhizdat, 1958. 87 p. (Tekhnologiia ugol'nogo mashinostroeniia, no.2). (MIRA 13:2)

(Gearing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A., doktor tekhn.nauk

Parabolic interpolation by the method of least squares. Nauch. trudy MGI no.18:207-233 '57. (MIRA 11:9)
(Mine surveying) (Least squares)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

GOTOVTSEV, A.A.; ROLANOV, V.A.

Factors affecting the performance of sectional and apron traction chains on scraper conveyers. Tekh.ugol.rasch. no.3:31-38 '59. (MIRA 14:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskiy institut ugol'nogo mashinostroyeniya.
(Conveying machinery)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

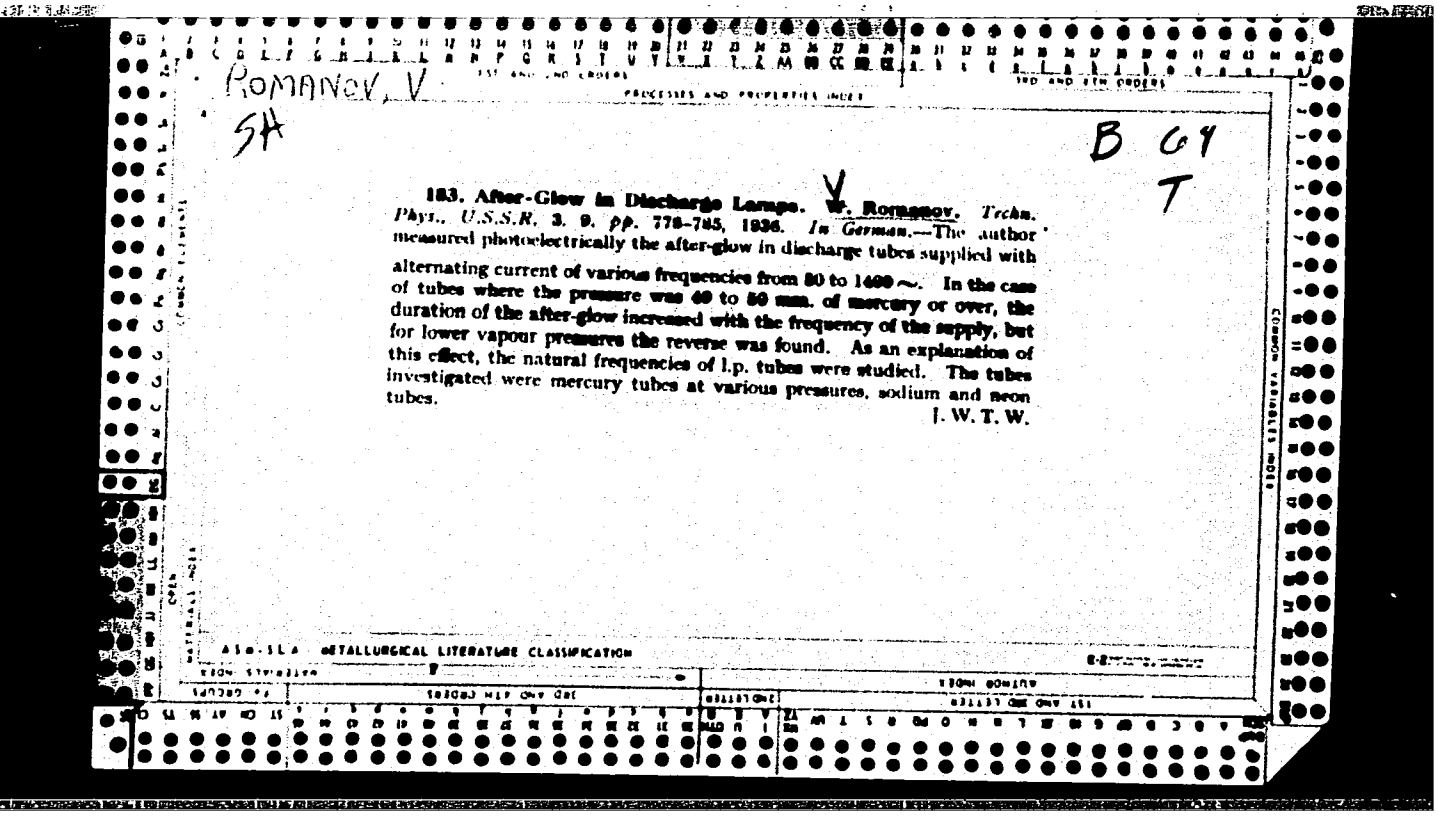
"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, Vladimir Alekseyevich, kand. sel'khoz. nauk; ANDREYEV, P., red.; LUKASHEVICH, V., tekhn. red.

[Millet in the southeast] Proso na IUgo-Vostoke. Saratov, Saratovskoe knizhnoe izd-vo, 1960. 60 p. (MIRA 14:9)
(Volga Valley—Millet)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4



ROMANOV, V

SH

B 04

T

183. **After-Glow in Discharge Lamps.** V. Romanov. *Techn. Phys., U.S.S.R.* 3. 9. *pp.* 778–785, 1936. *In German.*—The author measured photoelectrically the after-glow in discharge tubes supplied with alternating current of various frequencies from 50 to 1400 ~. In the case of tubes where the pressure was 40 to 50 mm. of mercury or over, the duration of the after-glow increased with the frequency of the supply, but for lower vapour pressures the reverse was found. As an explanation of this effect, the natural frequencies of l.p. tubes were studied. The tubes investigated were mercury tubes at various pressures, sodium and neon tubes.

J. W. T. W.

A 36-5 LA METALLURGICAL LITERATURE CLASSIFICATION

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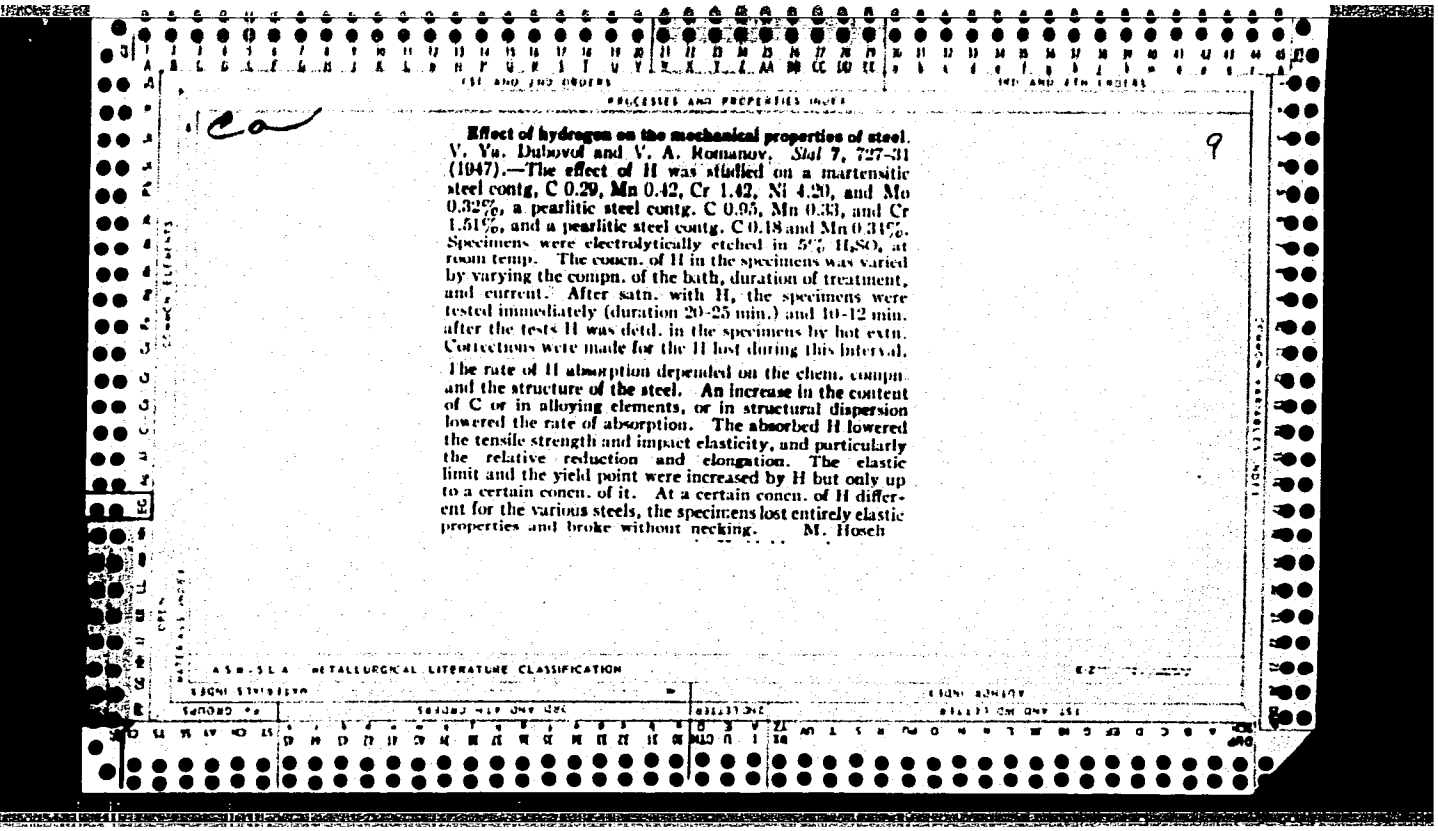

Effect of hydrogen on the mechanical properties of steel. V. Yu. Dubovoĭ and V. A. Romanov. *Stal* 7, 727–31 (1947).—The effect of H was studied on a martensitic steel contg. C 0.29, Mn 0.42, Cr 1.42, Ni 4.20, and Mo 0.32%, a pearlitic steel contg. C 0.95, Mn 0.33, and Cr 1.51%, and a pearlitic steel contg. C 0.18 and Mn 0.34%. Specimens were electrolytically etched in 5% H_2SO_4 at room temp. The concn. of H in the specimens was varied by varying the compn. of the bath, duration of treatment, and current. After satn. with H, the specimens were tested immediately (duration 20–25 min.) and 10–12 min. after the tests H was detd. in the specimens by hot extn. Corrections were made for the H lost during this interval.

The rate of H absorption depended on the chem. compn. and the structure of the steel. An increase in the content of C or in alloying elements, or in structural dispersion lowered the rate of absorption. The absorbed H lowered the tensile strength and impact elasticity, and particularly the relative reduction and elongation. The elastic limit and the yield point were increased by H but only up to a certain concn. of it. At a certain concn. of H different for the various steels, the specimens lost entirely elastic properties and broke without necking. M. Hoseh

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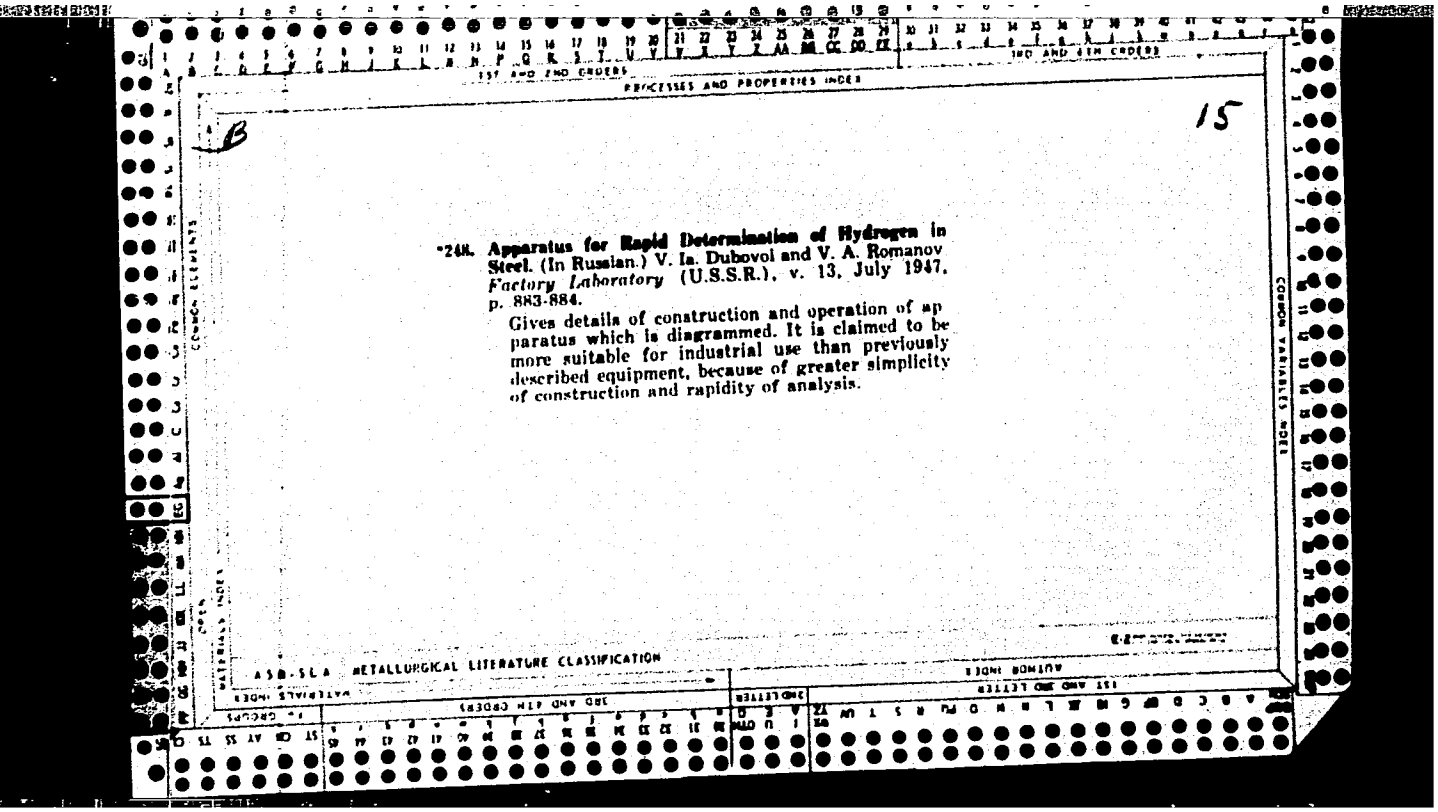
"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4



PROCESSES AND PROPERTIES INDEX

15

B

*24R. **Apparatus for Rapid Determination of Hydrogen in Steel.** (In Russian.) V. Ia. Dubovoi and V. A. Romanov *Factory Laboratory* (U.S.S.R.), v. 13, July 1947, p. 883-884.

Gives details of construction and operation of apparatus which is diagrammed. It is claimed to be more suitable for industrial use than previously described equipment, because of greater simplicity of construction and rapidity of analysis.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

USSR/Physics - Spectrometers

Card 1/1 Pub. 43 - 10/11

Authors : Kel'man, V. M.; Kaminskiy, D. L.; and Romanov, V. A.

Title : Beta-spectrometer with greater resolving power

Periodical : Izv. AN SSSR. Ser. fiz. 18/1, 148-154, Jan-Feb 1954

Abstract : The construction of a beta-spectrometer of greater resolving power (with symmetrical path of rays) is announced. The spectrometer consists of an electromagnet with screen, copper vacuum-chamber with two copper tubes attached to it, two magnetic lenses, source retainer and recording device. The components of the electrical magnet are described. The current in the coils is directed in such a way that the magnetic current produced by it in the iron yokes are oriented opposite each other. The magnetic current passes through the gap between the upper and lower iron plates of the yoke which also assume the role of poles. Some results obtained with this beta-spectrometer are listed. Two USSR references (1939-1951). Graphs; drawings.

Institution : Academy of Sciences USSR, Physico-Technical Institute

Submitted : December 15, 1953

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

USSR/Nuclear Physics - Beta-spectrometers

Card 1/1 Pub. 43 - 4/97

Authors : Kel'man, V. M.; Kaminskiy, D. L.; and Romanov, V. A.

Title : A larger prism beta-spectrometer with two magnetic lenses

Periodical : Izv. AN SSSR, Ser. fiz. 18/2, 209-214, Mar-Apr 1954

Abstract : The construction and testing of a larger scale prism-type beta-spectrometer with two magnetic lenses for greater resolving and illuminating power is announced. In principle this spectrometer is not different from the spectrometer model described in a previous report; however, its dimensions are larger and it was constructed with greater perfection. The structural and technical characteristics of the prism-type beta-spectrometer are described in detail. Three references: 2 USSR and 1 USA (1939-1954). Graphs; drawings.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

KEL'MAN,V.M.; ROMANOV,V.A.; METSKHVARISHVILI,R.Ya.

Measurement of the internal conversion coefficients for L- and M-subshells of ThC. Dokl. AN SSSR 103 no.4:577-579 Ag'55. (MLRA 8:11)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR. Predstavleno akademikom A.F.Ioffe
(Thorium--Isotopes) (Spectrometry) (Nuclear shell theory)

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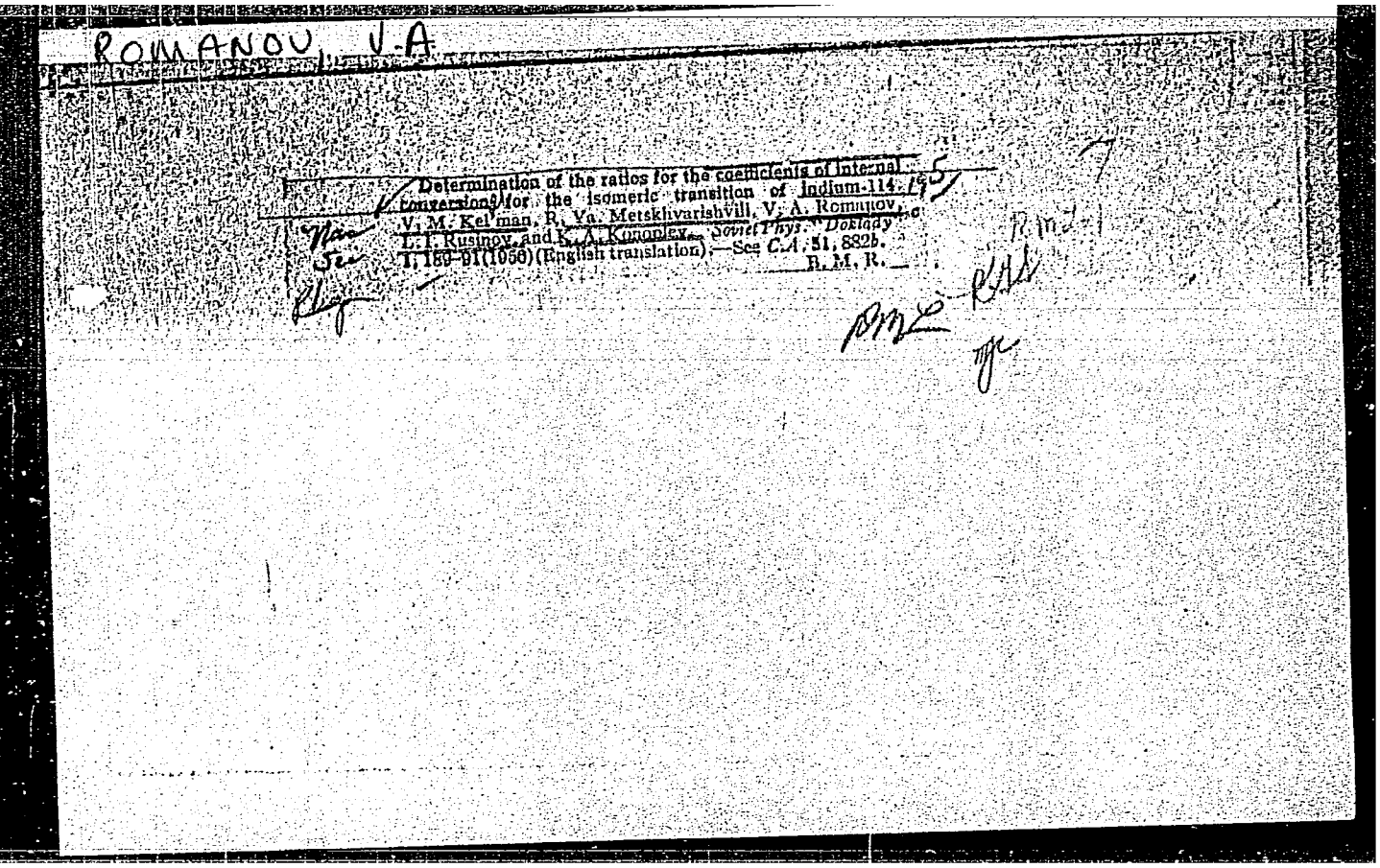

ROMANOV, V.A.

Determination of the ratios for the coefficients of internal conversion for the isomeric transition of indium-114. V. A. Romanov, V. M. Kel'man, R. Ya. Metskhvarishvili, V. A. Romanov, L. I. Rusinov, and K. A. Komarov. *Soviet Phys.—Doklady* 1:169–91(1956)(English translation).—See *C.A.* 51, 8826. R. M. R.

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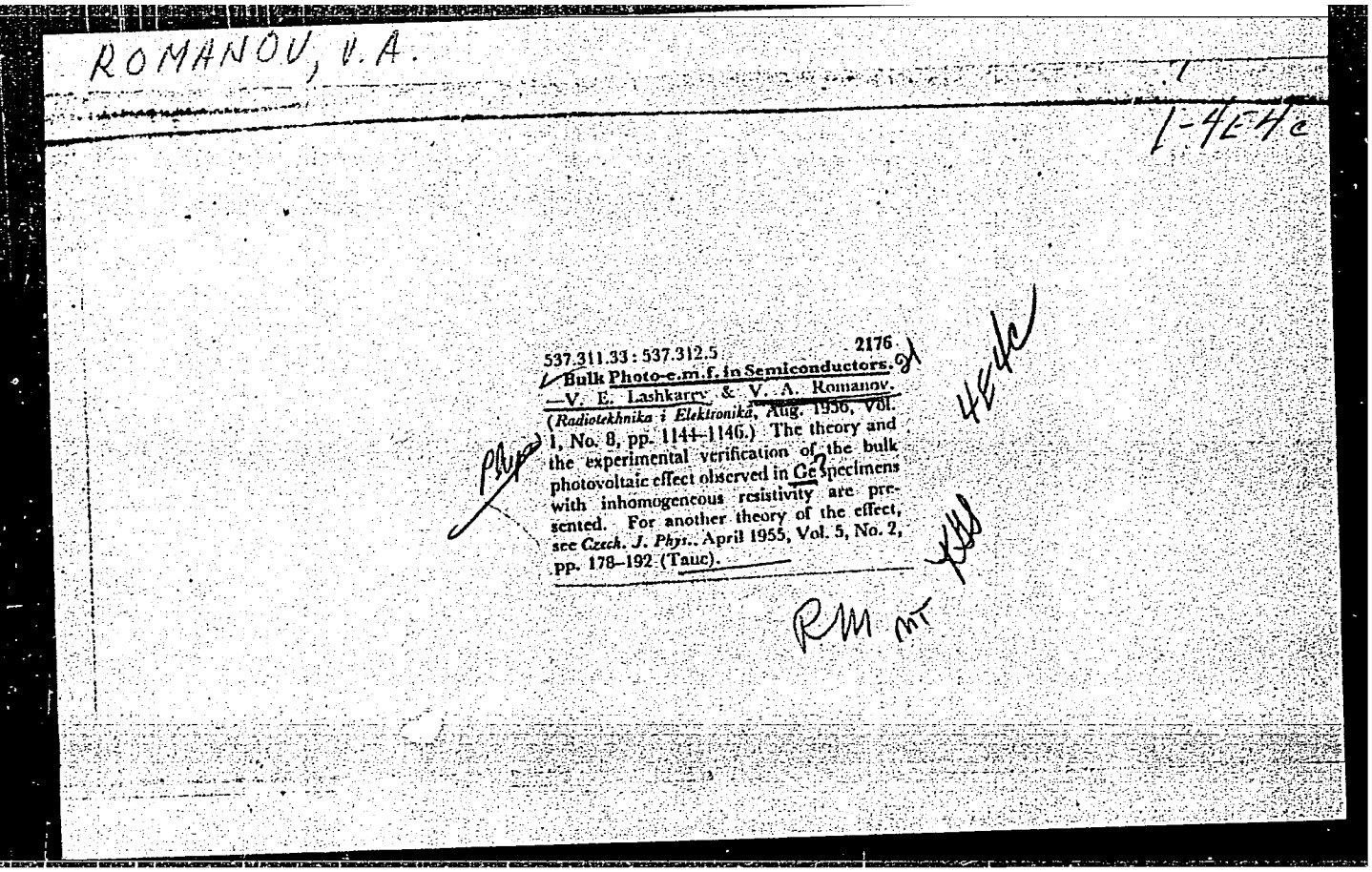

ROMANOV, V.A.

1-4E-4c

537.311.33 : 537.312.5 2176

Bulk Photo-e.m.f. in Semiconductors.—V. E. Lashkarev & V. A. Romanov. (*Radiotekhnika i Elektronika*, Aug. 1956, Vol. 1, No. 8, pp. 1144–1146.) The theory and the experimental verification of the bulk photovoltaic effect observed in Ge specimens with inhomogeneous resistivity are presented. For another theory of the effect, see *Czech. J. Phys.*, April 1955, Vol. 5, No. 2, pp. 178–192 (Tauc).

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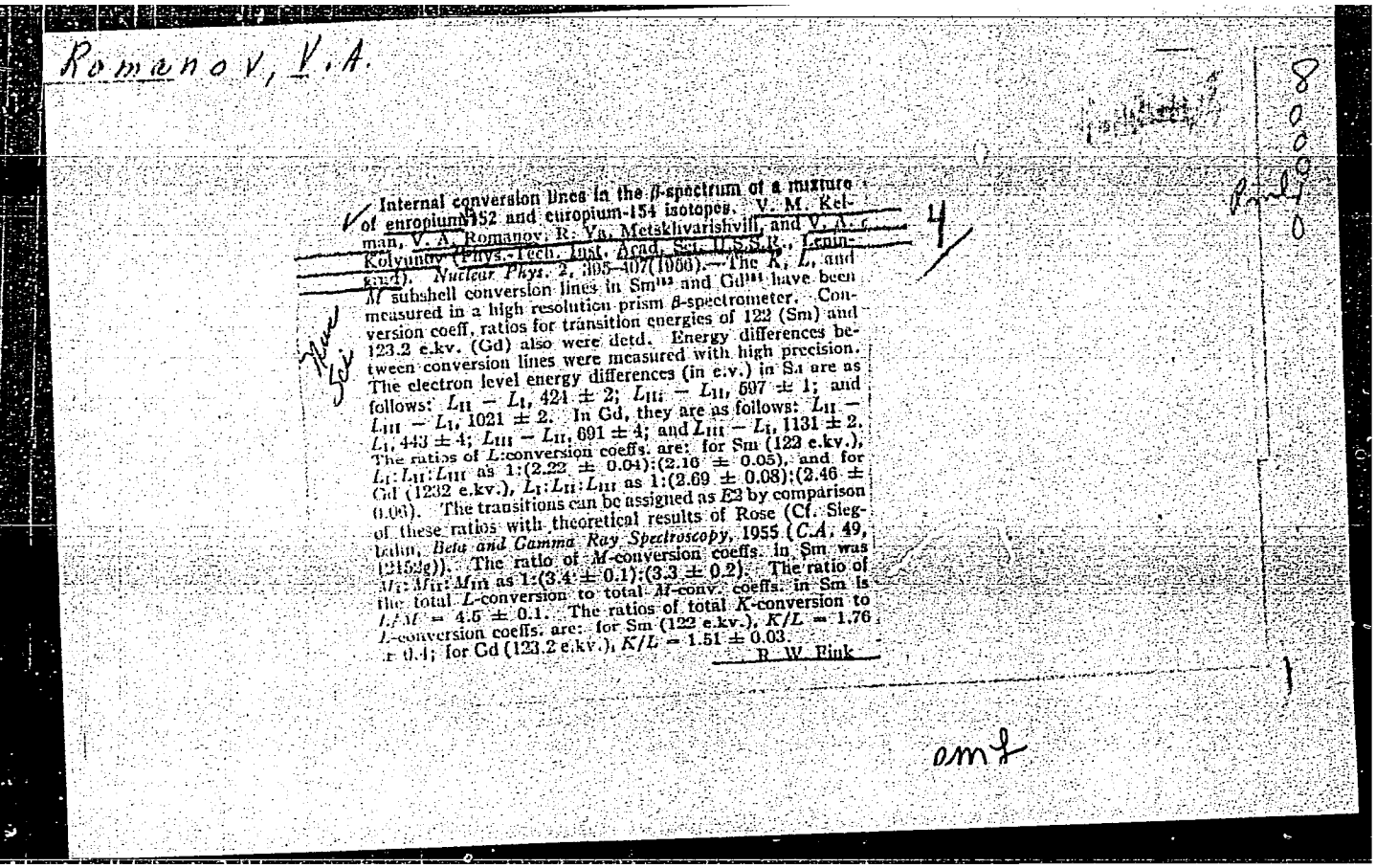

Romanov, V. A.

Internal conversion lines in the β-spectrum of a mixture of europium-152 and europium-154 isotopes. V. M. Kelman, V. A. Romanov, R. Ya. Metskhvarishvili, and V. A. Kolyundov (Phys.-Tech. Inst. Acad. Sci. U.S.S.R., Leningrad). *Nuclear Phys.* 2, 395–407(1956).—The *K*, *L*, and *M* subshell conversion lines in Sm^{152} and Gd^{154} have been measured in a high resolution prism β-spectrometer. Conversion coeff. ratios for transition energies of 122 (Sm) and 123.2 e.kv. (Gd) also were detd. Energy differences between conversion lines were measured with high precision. The electron level energy differences (in e.v.) in Sm are as follows: $L_{II} - L_I$, 421 ± 2; $L_{III} - L_{II}$, 697 ± 1; and $L_{III} - L_I$, 1021 ± 2. In Gd, they are as follows: $L_{II} - L_I$, 443 ± 4; $L_{III} - L_{II}$, 691 ± 4; and $L_{III} - L_I$, 1131 ± 2. The ratios of *L*-conversion coeffs. are: for Sm (122 e.kv.), $L_I:L_{II}:L_{III}$ as 1:(2.22 ± 0.04):(2.16 ± 0.05), and for Gd (1232 e.kv.), $L_I:L_{II}:L_{III}$ as 1:(2.69 ± 0.08):(2.46 ± 0.06). The transitions can be assigned as *E*2 by comparison of these ratios with theoretical results of Rose (Cf. Siegbahn, *Beta and Gamma Ray Spectroscopy*, 1955 (*C.A.* 49, 12152g)). The ratio of *M*-conversion coeffs. in Sm was $M_I:M_{II}:M_{III}$ as 1:(3.4 ± 0.1):(3.3 ± 0.2). The ratio of the total *L*-conversion to total *M*-conv. coeffs. in Sm is $L/M = 4.5 \pm 0.1$. The ratios of total *K*-conversion to *L*-conversion coeffs. are: for Sm (122 e.kv.), $K/L = 1.76 \pm 0.4$; for Gd (123.2 e.kv.), $K/L = 1.51 \pm 0.03$.

R. W. Fink

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV VA

G-3

USSR/Electricity - Semiconductors

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 7045

Author : Leshkarev, V.Ye., Romanov, V.A.
Title : Three-Dimensional Photo EMF in Semiconductors.

Orig Pub : Tr. In-ta fiziki AN USSR, 1956, vyp. 7, 50-59

Abstract : The photo emf occurring when a thin semiconductor, with a small resistivity gradient is illuminated by a narrow stationary light probe is theoretically derived. The magnitude of the three-dimensional photo emf is not a function of the absolute value if the specific resistivity, but only of its gradient. The sign of the photo emf is determined by the sign of the majority carriers and by the direction of the resistance gradient. The theory was verified with n-germanium/ Experience has shown that the theory gives the correct sign of the volume photo emf. The measured and calculated values of the volume photo emf were of the same order. The surface treatment affects the value of the photo emf to the same extent to which it changes the square of the diffusion length, but the overall variation of the photo emf does not change.

Card : 1/1

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

12204

INVESTIGATION OF CONVERSION LINES IN THE β-SPECTRUM OF Ir^{192}. V. M. Kolman, N. Ya. Metskhvarishvili, V. A. Romanov, and V. V. Tuchkevich (USSR Academy of Sciences, Leningrad). Nuclear Phys. 4, 240-7(1957) Aug.

A prism β spectrometer with a resolving power of 0.04% was employed to study the conversion electron spectrum of excited Pt^{192} and Os^{192} produced in the disintegration of Ir^{192}. The conversion coefficient ratios K/L and $L_I : L_{II} : L_{III}$ have been determined for transition energies 136.3, 201.3, 205.8, 295.9, 308.5, 316.5, 468.0, and 604.5 kev; for the most intense transitions the ratios K/M, $M_I : M_{II} : M_{III}$, K/N and K/O have also been determined. All investigated transitions were found to be of the E2 or E2 + M1 type. The contribution of the M1 admixture has been determined. (auth)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

V. A. Romanov

Distr: 4E3d

3974

INVESTIGATION OF CONVERSION LINES IN THE β-SPECTRUM OF A Sm^{152}–Eu^{154} MIXTURE. V. M. Kel'man, V. A. Romanov, R. Ia. Metskhvarishvili, and V. A. Kolluncv (USSR Academy of Sciences). Soviet Phys. JETP 5, 24-30 (1957) Aug.

Internal conversion lines in the K shells and L and M subshells of Sm^{152} and Gd^{154} were measured with a high resolution β spectrometer. The ratios of the conversion coefficients were determined for 122 and 123.2 kev transitions. The energy intervals between the conversion lines were measured with high precision. (auth)

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ROMANOV, V.A.

Nondifferential adjustment of gear-cutting machines. Stan.i instr. 28 no.9:17-18 S '57. (MIRA 10:10)

(Gear-cutting machines)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A.

AUTHOR: KEL'MAN, V.M., ROMANOV, V.A., MECCHVARISVILI, R.JA., KOLJUNOV, V.A. PA - 2057

TITLE: Investigation of Conversion Lines in the β Spectrum of an Eu^{152}, Eu^{154} Isotopic Mixture. (Issledovanie konversionnych linij v β-spektre smesi isotopov Eu^{152} i Eu^{154}, Russian).

PERIODICAL: Zhurnal Eksperimental'noi i Teoret.Fiziki, 1957, Vol 32, Nr 1, pp 39-47 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: The authors recorded the lines of the inner conversion on the K shells as well as on the L- and M-subshells of the Sm^{152} and Sm^{154} by means of a prism-β-spectrometer of great resolving capacity and determined the ratios of the conversion coefficients at the energies 122 and 123,2 keV of the transitions. The resolving capacity of the prism spectrometer used here was increased by the following measures: 1) Shielding of the tubes of the spectrometer against extraneous magnetic fields by iron rings. 2) The straight gap of the registering device was replaced by a slightly curved gap. 3) A certain modification of the feeding of the magnet and of the lens of the spectrometer.

The L-subshells of the Sm^{152} and Gd^{154}: A diagram demonstrates the sphere of the β-spectrum of a β-spectrum of Eu^{152} and Eu^{154}

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Investigation of Conversion Lines in the β Spectrum of an Eu^{152}, Eu^{154} Isotopic Mixture.

with those lines that were produced by the electrons of the inner conversion of the γ-rays with the energies 122 and 123,2 keV on the subshells of the Sm^{152} and Gd^{154}. The conditions under which the lines were obtained as well as the behavior of the lines are discussed. The theoretical ratios of the conversion coefficients agree with the here measured ratios.

The M-subshells of samarium: A further diagram demonstrates the sphere of the :-spectrum with the lines which are produced by the inner conversion on the M-subshell of samarium. The authors found the following ratio of the coefficients of the conversion on the M-subshells: $M_I:M_{II}:M_{III} = 1:(3,4\pm0,1):$ $:(3,3\pm0,2)$. This corresponds to the conclusions from the approximated calculations of the relative conversion coefficients. Furthermore $L/M = 4,5\pm0,1$ ($L=L_I+L_{II}+L_{III}$; $M = M_I+M_{II}+M_{III}$) was found.

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PA - 2057

Investigation of Conversion Lines in the β Spectrum of an Eu^{152}, Eu^{154} Isotopic Mixture.

The measurement of the ratios of the coefficients of the conversion on the K- and L-subshells of Sm and Gd: The K-lines Sm^{152} and Gd^{154} corresponding to the transition energies indicated above are demonstrated in a diagram. The energy difference of these conversion lines is measured by transfer of the electric shift to the sources and amounts to "117±1eV. Taking into account all measurings, the following values were found for the conversion coefficients: For Sm (transition energy 122 keV): K/L = 1,76±0,04 and for Gd (transition energy 123,2 keV): K/L = 1,51±0,03.

ASSOCIATION: Leningrad Physical-Technical Institute of the Academy of Sciences of the USSR.

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Romanov, V.A.

AUTHORS: Kel'man, V.M., Metskhvarishvili, R.Ya., Romanov, V.A. 56-3-6/59
Tuchkevich, V.V.,

TITLE: The Investigation of Conversion Lines in the ß-Spectrum of Ir^{192}. (Issledovaniye konversionnykh liniy v ß-spektre Ir^{192})

PERIODICAL: Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol. 33, Nr 3, pp.588-594 (USSR)

ABSTRACT: With the help of a prism-ß-spectrometer (resolving of 0,04 %) the conversion coefficients and the multipole order of the following γ- lines were determined:

E_γ in KeV	K/L	K/M	multipole order
136,3			(80±1)% E2 + (20∓1)% M1
201,3	1,85±0,04		(86±2)% E2 + (14∓2)% M1
205,8	1,83±0,04		E2
295 ,8	2,35±0,04	8,9±0.2	E2
308,5	2,38±0,02	9,5±0,2	(97±2)% E2 + (3∓2)% M1
316,5	2,22±0,02	9,3±0,2	E2
468,0	3,0 ±0,1	10,2±0,2	E2
604,5	4,7 ±0,1		(88±2)% E2 + (12∓2)% M1

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The Investigation of Conversion Lines in the ß- Spectrum of Ir^{192} 56-3-6/59

There are 2 tables, 3 figures, and 5 Slavic references.

ASSOCIATION: Leningrad Physical-Technical Institute AN USSR
(Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR)

SUBMITTED: March 18, 1957

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

L 18758-66 EWT(1)/T/EWA(h) IJP(c) AT
ACC NR: AP6003763 SOURCE CODE: UR/0181/66/008/001/0067/0071

AUTHORS: Lashkarev, V. Ye.; Malyutenko, V. K.; Romanov, V. A.

ORG: Institute of Semiconductors AN UkrSSR (Institut poluprovodnikov AN UkrSSR)

TITLE: Method of determining the lifetime of minority carriers in monopolar photoconductors 21,44,55

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 67-71

TOPIC TAGS: minority carrier, photoconductivity, photoconductor, carrier lifetime, semiconductor carrier, photomagnetic effect, physical diffusion, electron recombination

ABSTRACT: In view of the fact that the standard method of determining the lifetime of minority carriers, based on the stationary photomagnetic effect, is not applicable to semiconductors in which the diffusion of the nonequilibrium carriers occurs within the limits of the near-surface bending of the bands, the authors propose a new method, based on an investigation of the frequency dependence of the

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ACC NR: AP6003763

of the photoconductivity time $\tau_\sigma(\omega) = RC$, where R and C are the parameters of the compensating cell of the alternating photocurrent bridge. The calculation of the frequency dependence of the photoconductivity time is based on an earlier paper by the author (with E. I. Rashba et al., ZhETF v. 28, 1853, 1958) under the assumption that the recombination in the semiconductor proceeds only via a single recombination level, the light is strongly absorbed, and no charges accumulate on the surface of the semiconductor. It is found that at low radiation-modulation frequencies the photoconductivity lifetime is independent of the frequency and is equal to the electron-state lifetime. In the case of high modulation frequency, there is likewise no dependence on the frequency, but the two lifetimes are no longer equal. For germanium samples, which are monopolar at low temperature, this case was observed experimentally. The results obtained by this method can be monitored by measuring the photomagnetic effects, which is likewise determined by the lifetimes of the minority carriers. The authors thank E. I. Rashba for a discussion of the results. Orig. art. has: 2 figures, 5 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 28Jun65/ ORIG REF: 005/ OTH REF: 002

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

L 42067-66 EWT(m) IJP(c)

ACC NR: AP6005332 SOURCE CODE: UR/0413/66/000/001/0070/0070

AUTHORS: Serbinov, A. N.; Romanov, V. A. 36 B

ORG: none

TITLE: Accelerating tube with oblique fields for an electrostatic accelerator. Class 21, No. 177569 19

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 70

TOPIC TAGS: ion accelerator, electrostatic accelerator

ABSTRACT: This Author Certificate presents an accelerating tube with oblique fields for an electrostatic accelerator. To insure a constant trajectory of the ion beam with variation of the accelerating voltage, the tube has a preliminary acceleration section with flat electrodes and a compensating section with oblique electrodes (see Fig. 1). An electrostatic corrector connected to the high voltage divider of the tube is placed at the output of the tube.

UDC: 621:384.6

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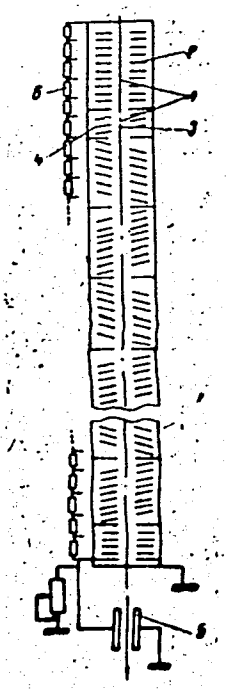
ACC NR: AP6005332

Fig. 1. 1 - preliminary acceleration section; 2 - flat electrodes; 3 - compensating section; 4 - oblique electrodes; 5 - electrostatic corrector; 6 - high voltage divider



Orig. art. has: 1 figure.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

AUTHORS: Lashkarev, V. Ye., Rashba, E. I., Romanov, V. A., Demidenko, Z. A. SOV/57-28-9-1/33

TITLE: Kinetics of Some Electronic Processes in Semiconductors (Kinetika nekotorykh elektronnykh protsessov v poluprovodnikakh)

PERIODICAL: [illegible] Vol. 28, Nr 9, pp 1853-1870 (USSR)

ABSTRACT: [illegible] investigation of some electronic processes in semiconductors. It is postulated that the absorption of the light quantum leads to the production of a pair of electron holes in the same place in the crystal. This implies that the particular features connected with the possible participation of excitons in the development of photoconductivity are not taken into consideration. The kinetics of photoconductivity, of the bulk photo e.m.f., of the photomagnetic effect, and of the photoconductivity in semiconductors subjected to a magnetic [illegible] investigated. Equations describing these effects derived in linear approximation. After the kinetics of electronic processes had been studied, the problems involved in the determination of

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Kinetics of Some Electronic Processes in Semiconductors SOV/57-2-9-1/33

the parameters of bulk and of surface recombination are discussed. In particular it is shown that a joint investigation of the kinetics of photoconductivity and of the photo e.m.f. facilitates a simple judgement on the occurrence of a carrier capture. The general formulae deduced are applied to the investigation of a number of sample cases. An experimental equipment incorporating a Kerr-cell was constructed. It permitted to make measurements in a wide range of temperature and frequency with a high accuracy. Experimental evidence bearing on the kinetics of photoconductivity and the volume e.m.f. is presented. It is then compared with theory. Ye.G. Miselyuk, A.N. Kvasnitskaya and V.B. Mertens made available the germanium samples.
There are 10 figures and 24 references, 18 of which are Soviet.

ASSOCIATION: Institut fiziki AN USSR, Kiyev (Institute of Physics, AS UkrSSR, Kiyev)

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S/181/60/002/011/004/042
B006/B056

24.2600 (1035, 1043, 1158)

AUTHORS: Rashba, E. I. and Romanov, V. A.

TITLE: A Photoelectric Method Used to Discover the Depth Inhomogeneity of a Semiconductor

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 11, pp. 2689 - 2692

TEXT: A knowledge of the depth inhomogeneity of semiconductors is of importance for a number of problems as, e.g., for the diffusion of impurities. The authors have developed a method for determining the "depth dependence" of the carrier lifetime. First, it is shown theoretically that by studying the frequency dependence of the complex amplitude of photoconductivity (especially of τ_{eff}), the depth inhomogeneity of τ may be found and studied, for $\tau_{eff}(\omega) = \frac{1}{\omega} \arctan \Phi(\omega)$, where $\Phi(\omega)$ is the phase delay of the photocarriers with respect to the exciting light. The theoretical solution of the problem is restricted to small gradients of $\tau(z)$. For the purpose of experimentally verifying the above-described rules, some Ge specimens were examined. Fig. 1 shows $\tau_{eff}(\omega)$

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

A Photoelectric Method Used to Discover the Depth Inhomogeneity of a Semiconductor

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B006/B056

for p-type Ge, into which from one side Ni had been diffused in vacuo at 800°C within 1.5 min. On the other side there was an Au layer which acted as a getter. The specimens were 1.8 mm thick, the lifetime gradient being $L_d \, d\ln\tau/dz \simeq 0.2$. An inhomogeneous function $\tau(z)$ may also easily be achieved by using specimens in which τ depends on the time of exposure: by constant unilateral exposure τ becomes a function of z. Fig.2 shows $\tau_{eff}(\omega)$ for homogeneous n-type Ge specimens of 3.5 mm thickness with noticeable hyperlinearity within the range of low intensities.

V. Ye. Lashkarev, Member of the AS UkrSSR, is thanked for his interest and advice, and A. N. Kvasnitskaya for placing the Ge single crystals at their disposal. There are 2 figures and 2 Soviet references.

ASSOCIATION: Institut fiziki AN SSSR Kiyev (Institute of Physics of the AS USSR, Kiyev)

SUBMITTED: May 7, 1960

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

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большом, а эффективное время $\tau_{эфф.}$ в обоих случаях буд

разом, изучение частотной зависимости комплексной ампл
оводимости (в частности, $\tau_{эфф.}$) позволяет обнаружить и и

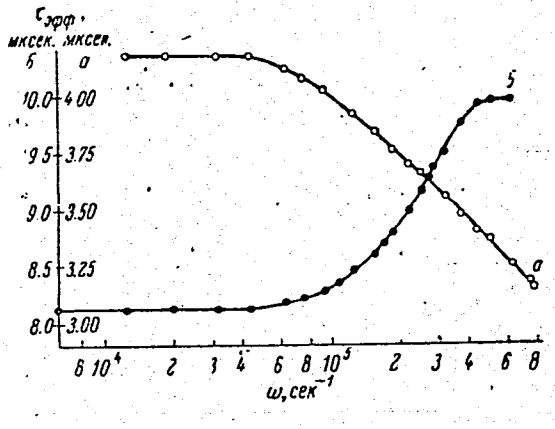

Fig. 1

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Legend to Fig.1: Frequency dependence of the effective duration of photoconductivity for Ge specimens with unilaterally diffused nickel; a) exposure from the nickel-containing side, b) exposure from the side without nickel.

Legend to Fig.2: Frequency dependence of τ_{eff} for a hyperlinear homogene Ge specimen which is alloyed with Sb; a) $\tau_{eff}(\omega)$ when exposed to weakly modulated light; b) $\tau_{eff}(\omega)$ with additional weak exposure from the same (front) side; c) $\tau_{eff}(\omega)$ with the same exposure from the rear.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

ROMANOV, V.A. [Romanov, V.O.]; ZHAD'KO, I.P.; KOSHEL', O.N. [Koshel', O.M.]

Some characteristics of the photoconductivity of PbS films. Ukr. fiz. zhur. 8 no.10:1092-1102 O '63. (MIRA 17:1)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

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L 57550-65 EWT(1)/EWT(m)/EWG(m)/EEC(t)/EWP(t)/EWP(b) Pz-6 IJP(c) RDW/JD/AT

ACCESSION NR: AP5014579 UR/0181/65/007/006/1777/1782

AUTHOR: Zhad'ko, I. P.; Rashba, E. I.; Romanov, V. A.; Stakhira, I. M.; Tovstyuk, K. D.

TITLE: Anistropy of electric and photoelectric properties of In_2Se

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1777-1782

TOPIC TAGS: Dember effect, transverse Dember effect, electron mobility, hole mobility, anisotropic semiconductor

ABSTRACT: A theory of the transverse Dember effect was derived on the basis of the difference in the anisotropy of electron and hole mobility in macroscopic anisotropic semiconductors. The theory attributes the emergences of nonequilibrium carriers at the specimen's rear side to the influence of the field of the transverse photoelectromotive force. In_2Se specimens consisting of single crystals 1 to 3 cm^3 in volume were used to detect experimentally the transverse Dember effect. This material was selected because of its structural anisotropy (the lattice of In_2Se is diamond-shaped (D_{2h}) with parameters a = 4.065 Å, b = 12.24 Å, c = 15.23 Å) and its photosensitivity. The type of conductivity of the specimens was determined from the sign of the thermal emf and the Hall effect, and from the sign of photo

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emf during illumination of a point tungsten probe. Investigations were made of electron-type specimens with $\rho \sim 10^{-1}$ and $\rho \sim 10^{3}$ ohm.cm and hole-type specimens with $\rho \sim 10^{3}$ ohm.cm. The electron mobility in low ohmic electron-type In_2Se specimens at room temperature was of the order of 500 $cm^2/v \cdot sec$. The hole mobility at room temperature was smaller by at least one order. During illumination of a plate cut out at a 45° angle to the a-axis and containing a b-axis (light beam intensity $\sim 3 \times 10^{15}$ quanta/sec) a photo emf of several millivolts was observed in the direction perpendicular to axis b. A photo emf of the same order was also observed on specimens cut out at a 45° angle to the a-axis but containing a c-axis. No photo emf was observed during the illumination of faces perpendicular to the b-axis. The measured characteristic times for photoconductivity and transverse photo emf coincided and for various n- and p-type specimens were $\tau = 0.1—0.4$ μsec. Thus, at such small τ the contribution to the transverse effect by anisotropic thermal emf caused by the heating of specimens is negligible. Orig. art. has: 13 formulas and 2 figures. [JA]

ASSOCIATION: Institut poluprovodnikov AN UkrSSR, Kiev (Institute of Semiconductors, AN UkrSSR)

SUBMITTED: 08Jan65 ENCL: 00 SUB CODE: SS, EM

NO REF SOV: 004 OTHER: 003 ATD PRESS: 4037

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

MALYUTENKO, V.K.; ROMANOV, V.A. [Romanov, V.O.]

Some characteristics of the photoconductivity of inhomogeneous semiconductors. Ukr. fiz. zhur. 10 no.4:459-461 Ap '65.
(MIRA 18:5)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

YERMAK, I.I., inzh.; ROMANOV, V.A.

Automatic line for manufacturing coal-mining combine bits. Mekh. i avtom. proizv. 15 no. 5:10-11 My '61. (MIRA 14:5)
(Automation) (Metalwork)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

FILYAND, M.A., kand.tekhn.nauk; ROMANOV, V.A., kand.tekhn.nauk; LIBMAN, N.B., inzh.; PODOLINSKAYA, S.N. [deceased], inzh.

Heating precision alloys without oxidation. Metalloved. i term. obr. met. no. 5:15-18 My '60. (MIRA 13:12)

1. Nauchno-issledovatel'skiy institut chasovoy promyshlennosti.
(Alloys--Heat treatment) (Protective atmospheres)
(Titanium hydride)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

IODKO, M.G.; ROMANOV, V.A.; TUCHKEVICH, V.V.

Relative intensity of conversion electrons in Lu^{169} and Lu^{171}. Izv. AN SSSR Ser. fiz. 24 no.12:1465-1469 D '60. (MIRA 13:12)

1. Fiziko-tekhnicheskiy institut AN SSSR.
(Lutetium—Isotopes)

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S/048/60/024/012/003/011
B019/B056

AUTHORS: Tuchkevich, V. V., Romanov, V. A., and Iodko, M. G.

TITLE: Relative Intensities of Lu^{170} and Lu^{172} Conversion Electrons

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 12, pp. 1457-1464

TEXT: The present paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which was held in Moscow from January 19 to January 27, 1960. The authors investigated the relative intensities of the conversion lines by means of a spectrometer with double focusing, a line half-width of from 0.25-0.35%, and a solid angle of 0.1-0.2%. Lutecium fraction, which had been separated from a Ta target irradiated with 660-Mev protons was used as a source. Table 1 shows the energies and the relative intensities of conversion lines in the Yb^{172} spectrum and the energies and relative intensities of the γ-lines, which had been taken from a paper by Dilman et al. (Ref. 2). On the basis of these data, the internal conversion coefficients for a number of transitions were calculated, and the multiplicities of these transitions could be estimated.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Relative Intensities of Lu^{170} and Lu^{172} Conversion Electrons

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There follows a detailed discussion of these data, and a discussion of experimental results, which the authors consider to be in need of improvement. The investigations of the transition energies and the conversion electron intensities of Yb^{170} yielded rather inexact results. Partly, the occurrence of a large number of weak lines with short half-lives in the conversion electron spectrum is to blame for this. Table 5 gives the transition energies and the intensities of the conversion lines of Yb^{170}, the doubtful data being shown in brackets. A possible variant of the decay scheme is shown in Fig. 2. There are 2 figures, 5 tables, and 12 references: 6 Soviet, 5 US, and 1 Danish.

Text to Table 1: 1) Transition energy; 2), 3), and 4) Conversion line intensities; 5) Energy according to data by Dilman; 6) Intensities according to data by Dilman in units used by the authors; 7) Conversion coefficient; 8) Total intensity of conversion lines;
Text to Table 5: 1) Transition energy; 2) and 3) Conversion line intensities; 4) Total intensity; 5) Multiplicity.

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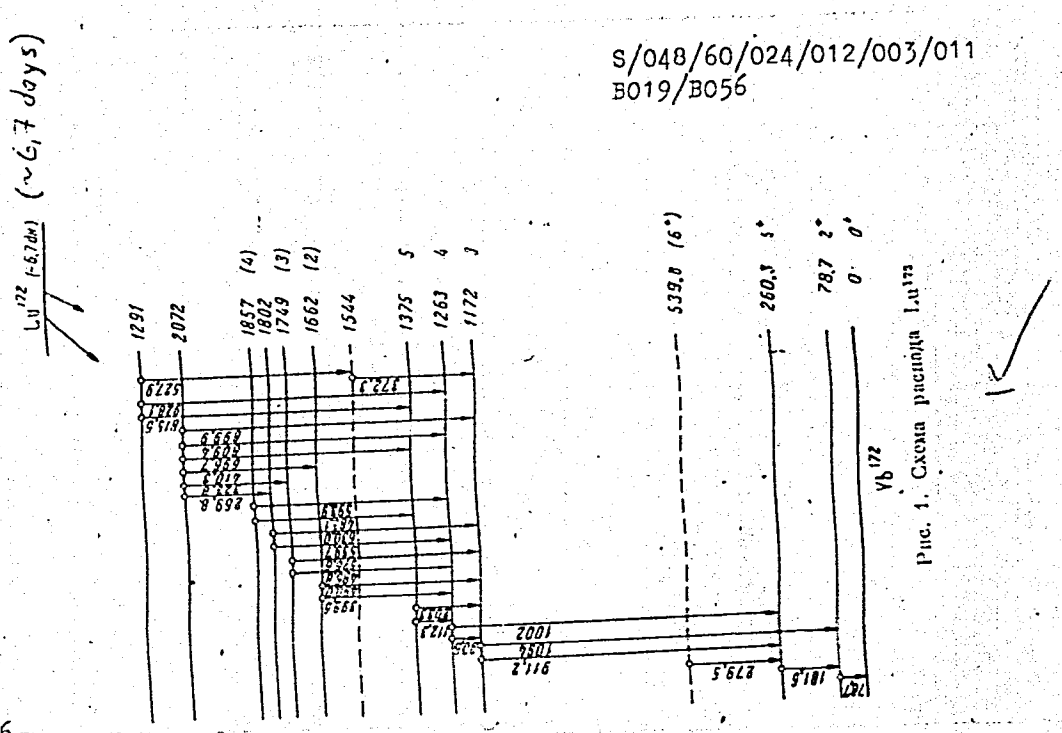

Рис. 1. Схема распада Lu^{172}

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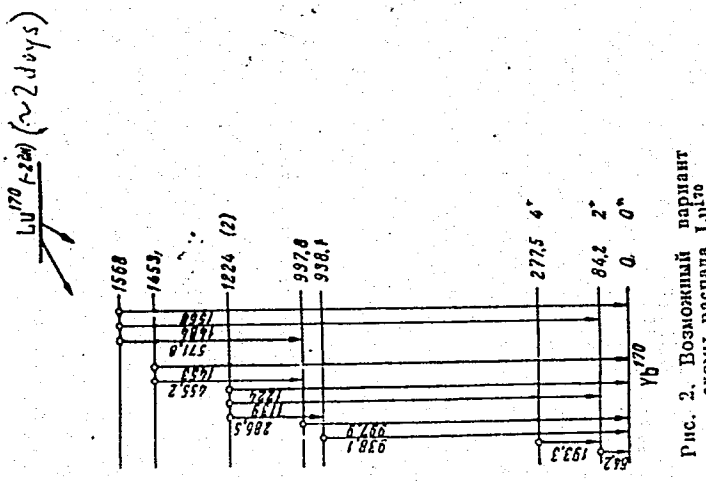

Рис. 2. Возможный вариант схемы распада Lu^{170}

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1 E, keV	2 I_K*	3 I_L	4 I_N	5 Энергия по [2], keV	6 Интенсивность по [2] в произвольных единицах
78,7	1300±100	2700±60	700±100	79±2	1557
90,6	500±30	600	140±10	—	—
112,3		100	25±5	113±3	750
181,6	195±5	100	24,5±0,5	181±5	806
203,3	36,5±0,8	11,1±0,3	5,8±0,3	203±5	328
269,8	13,3±0,4	2,3±0,2	<1,7	—	—
279,5	4,5	1,1	—	—	—
318,8	1,3	—	—	325	—
323,8	8,6±0,5	1,7±0,1	0,8	370±5	556
372,3	6,3±0,1	1,2	—	—	—
377,4	1,2	—	—	—	—
399,6	1,9±0,2	—	—	—	—
410,3	4,9±0,3	1,3	—	—	—
482,1	1,2±0,1	0,7	—	—	—
485,8	1,2±0,15	—	—	—	—
490,0	3,5±0,4	—	—	525±10	528
527,9	4,5±0,2	1,4±0,2	—	—	—
539,7	1,7	0,3	—	—	—
576,6	0,5	—	—	—	—
594,0	0,74	—	—	—	—
626,4	1,6±0,2	0,4	—	—	—
630,0	0,65	<0,58	—	—	—
696,7	3,6±0,3	0,8±0,1	0,38	820±7	258
809,4	6,2±0,2	1,2±0,1	0,47	—	—
815,6	0,71	—	—	—	—
899,9	10,1±0,2	1,5±0,2	0,36	900±5	722
911,2	3,0±0,1	0,54	0,2	—	—
928,1	1,2	—	—	—	—
986,3	0,4	<0,2	—	—	—
1002	0,9±0,2	<1,0	—	—	—
1094	7,2±0,2	1,4±0,1	—	1090±10	1446
1113	0,54	<0,40	—	—	—

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Table 5

Энерг перех. keV*	I_K**	I_L	Полна тенсив ность	Мульти-полярность	Энергия перехода, keV *	I_K**	I_L	Полная интенсивность	Мульти-полярность
84,2	1400±200	7600	14300	$E2$	511,7	1,4	—	—	—
184,5	14,9	—	—	—	543,9	<7	—	—	—
193,3	100	59	760	$E2$	(560,9	1,2	—	—	—
222,7	11±2	≲3	—	—	571,8	2,4	—	—	—
279,4	—	≲4	—	—	756,2	≲0,3	—	—	—
282,9	8,5±0,3	1,8	—	—	837,1	≲2,1	—	—	—
286,5	3,3±0,4	—	—	—	938,1	3,7±0,1	—	—	—
382,1	≲3,5	<1,8	—	—	983,2	<5	—	—	—
(386,3	1,4	—	—	—	997,9	≲2	—	—	—
388,7	2,7	<1,3	—	—	(1103)	1,3±0,1	—	—	—
396,1	4,6	≲2	—	—	1139	2,3±0,1	—	≈1000	—
416,8)	1,5	—	—	—	1224	2,1±0,3	—	≈1000	—
419,6)	—	≲1,8	—	—	1281	2,0±0,1	—	—	—
455,2	≲3	≲1,2	—	—	1454	14,0±0,3	1,8	1500÷18000	—
487,3	1,7	—	—	—	1484	8,4±0,2	1,5	1000÷13000	—
					1568	1,8	—	200÷3000	—

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AUTHORS: Iodko, M. G., Romanov, V. A., Tuchkevich, V. V.

TITLE: Relative Intensities of Lu^{169} and Lu^{171} Conversion Electrons

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 12, pp. 1465-1469

TEXT: The present paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which was held in Moscow from January 19 to January 27, 1960. The conversion electron spectra of Lu^{169} and Lu^{171} were investigated by means of a β-spectrometer with double focusing, the relative line width amounted to 0.25-0.35%. The two sources were obtained by irradiation of Ta targets with 660-Mev protons on the synchrocyclotron of the OIYaI (Joint Institute of Nuclear Research), the Lu fraction was separated by ion exchange and applied onto an Al foil. As the Lu^{169} and Lu^{170}-half-lives are nearly equal, the lines of these isotopes could not be separated. Table 1 shows the relative intensities of the conversion lines

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of Lu^{169}, Table 3 shows the Yb^{171}-transition energies and relative intensities of the conversion electrons. The decay schemes already known are shown in Figs. 1 and 2. L. A. Sliv and I. M. Vand (Ref. 5) are mentioned. The authors thank V. M. Kel'man for his interest, B. S. Dzhelepov and L. K. Peker for valuable comments, as well as G. L.Vlasenko and V. P. Belov for their assistance in the measurements. There are 2 figures, 4 tables, and 8 references: 5 Soviet, 2 US, and 1 Danish.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institute of Physics and Technology of the Academy of Sciences USSR)

Text to Table 1: 1) Energy of the transition line; 2), 3), and 4) are the relative intensities of the Lu^{169} conversion lines.
Text to Table 2: 1) Yb^{171} transition energies; 2), 3), and 4) relative intensities of the conversion electrons.

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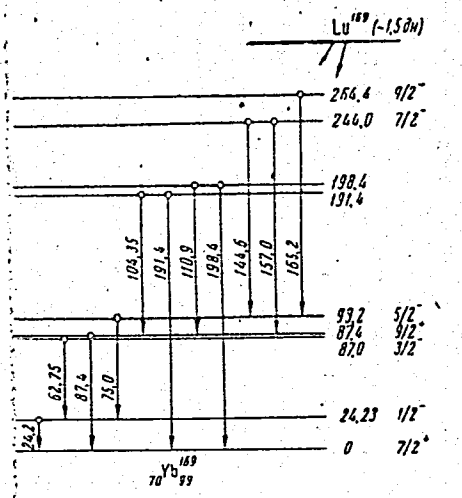

Рис. 1. Схема распада Lu^{169}

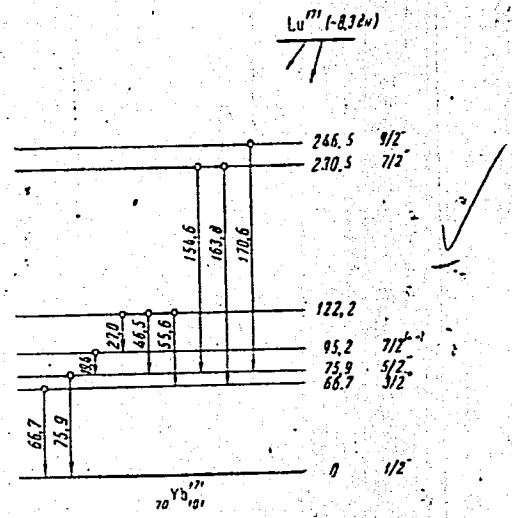

Рис. 2. Схема распада Lu^{171}

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Таблица 1

Относительные интенсивности конверсионных линий Lu^{169}

1 E,keV	2 K	3 L	4 M	1 E,keV	2	3 L	4	1 E,keV	2 K	3	4 M
24,2	—	9000	—	227,9	—	12	—	563	9	—	—
62,6	—	11300	—	243	—	22	9	590,8	—	4	—
87,3	18100	—	—	258	112	—	—	634,6	15	—	—
91,8	3800	—	—	290,9	100	20	7,4	646,9	3,5	—	—
110,9	—	1000	250	369,1	102	—	—	655,4	1,4	—	—
144,5	—	186	105	378,3	205	30	11	707,4	> 3,6	—	—
156,8	830	530	—	403,9	12	—	—	820,9	8	—	—
164,9	1100	790	130	456,5	57	9	—	879,3	6,7	—	—
166,5	130	—	—	470,4	—	6	—	960,6	55	8,7	—
191,5	1700	350	—	479,5	16	4	—	1061	28	—	—
198,6	200	—	—	491,7	—	9	—	1072	24	—	—
				548	17	3	—	1079,5	6,4	—	—

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Энергии переходов Yb^{171} и относительные интенсивности конверсионных электронов

1 E, keV	2 K	3 L	4 M	E, keV	K	L	M
55,63	—	5500	—	712,6	10	2,7	1,4
66,8	—	14600	—	739,4	100	16	3
72,38	—	3000	—	767,2	8,5	—	—
75,97	2800	41000	8700	780,6	9	—	—
85,55	3800	—	—	839,3	26	5,5	—
91,28	1500	—	—	853,9	3	—	—
498,4	5	—	—	986,0	2	—	—
517,7	9	4	—	1020	2,5	—	—
626,2	11	2	—	1029	1,	—	—
666,8	29	5	3	1037	2,	—	—
688,8	6,5	—	—	1042,9	3	—	—
				1102,8	2	—	—

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ROMANOV, V.A., prof.; MINING, S.E., inzh.

New method of evaluating the accuracy of connecting to mine plumb bobs by means of a tie-in quadrilateral. Izv. vys. ucheb. zav.; gor. zhur. no.9:53-60 '60. (MIRA 13:9)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut. Rekomend. kafedroy marksheyderskogo dela i geodezii.
(Mine surveying)

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OLLI, Al'bert Ivanovich; ROMANOV, Vadim Aleksandrovich; OGARINOV, I.S., kand.geologo-mineral.nauk, otv.red.; SIDOROV, V.V., red.; VALEYEV, G.G., tekhn.red.

[Tectonic map of Bashkiria] Tektonicheskaia karta Bashkirii; ob"iasnitel'naia zapiska. Ufa, Akad.nauk SSSR, Bashkirskii filial, Gorno-geol.in-t, 1959. 35 p., 2 maps. (MIRA 13:2)
(Bashkiria--Geology, Structural--Maps)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220018-4

Romanov, V.A.

3(5) PHASE I BOOK EXPLOITATION SOV/2938

Akademiya nauk SSSR. Bashkirskiy filial. Geno-geologicheskiy institut

Voprosy geologii i neftenosnosti devonskikh otlozheniy Zapadnoy Bashkirii i smezhnykh oblastey; materialy nauchnoy sessii (Problems in the Geology and Oil-Bearing Possibilities of the Devonian Sediments of Western Bashkiria and Adjacent Provinces; Papers of a Scientific Session...) Ufa, 1958. 137 p. 750 copies printed.

Ed.: V. V. Sidorov; Tech. Ed.: I. G. Shafiri Editorial Board: S. N. Krause (Resp. Ed.), M. F. Mikryukov, I. S. Charimov, A. I. Olli, L. N. Rozanov, K. R. Timergazin, and A. P. Tyazhova.

PURPOSE: The book is intended for petroleum geologists.

COVERAGE: This book contains papers on the petroleum geology of Bashkiriya. These papers were originally read at a conference held in Ufa on December 23-25, 1957. Individual reports discuss the stratigraphy, lithology, geochemistry, tectonic structure, and oil-bearing capacities of the Devonian sediments in Bashkiriya and adjacent regions. No references are given.

AVAILABLE: Library of Congress (TN874.B9A5675)

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ROMANOV, V. A., Cand of Phys-Math Sci -- (diss) "Determination of the relationship of the coefficients of internal conversions of gamma-rays and L and M sub-coats of radioactive nuclei." Leningrad, 1957, 10 pp (Leningrad Physiotechnical Institute) (KL, 32-57, 92)

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KEL'MAN, V.M.; METSKHVARISHVILI, R.Ya.; PREOBRAZHENSKIY, B.K.; ROMANOV, V.A.; TUCHKEVICH, V.V.

Investigation of spectra of conversion electrons of neutron deficient lutetium isotopes. Zhur. eksp. i teor. fiz. 35 no.5: 1309-1310 N '58. (MIRA 12:3)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
(Lutetium--Spectra)

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ROMANOV, V.A., kand.tekhn.nauk

Electromagnets and magnetoelectric converters for electrohydraulic control systems. Izv.vys.ucheb.zav.; prib. no.5:19-23 '58.
(MIRA 12:6)

1. Leningradskiy politekhnicheskiy institut.
(Electromagnets) (Electric current rectifiers)
(Automatic control)

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