"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, A.D.

Climatic characteristics of summer precipitation in the northern regions of Kirghizia. Trudy Sred.-Az.nauch.-issl.gidrometeor. inst. no. 8:17-33 '63. (MIRA 17:5)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

VLADIMIROV, V.M.; SUTYAGIN, G.N.

Apparatus for determining soil adhesion by means of breaking under field conditions. Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:319-323 '60. (MIRA 14:4)
(Soil mechanics—Research)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

VLADIMIROV, V.M.; SUTYAGIN, G.N.

Apparatus with a built-in recorder for determining the shear resistance of soil. Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:324-328 '60. (MIRA 14:4)

(Soil mechanics--Research)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

VLADIMIROV , V.M.; SUTYAGIN, G.N.

Laboratory studies of a rotor with inertial unloading. Trudy Inst. gor. dela Sib. otd. AN SSSR no.7:49-52 '62. (MIRA 16:9)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

BARSOV, Nikolay Nikolayevich, dotsent, kand.geograf.nauk; BONIFAT'YEVA, Lidiya Ivanovna, dotsent, kand.geograf.nauk; BURENKO, Sergey Fedorovich, dotsent, kand.geograf.nauk; GITLITS, Semen Aleksandrovich, dotsent, kand.ekonom.nauk; GUREVICH, Priam Vladimirovich, prof.; DARINSKIY, Anatoliy Viktorovich, dotsent, kand.geograf.nauk; DOLININ, Alekseу Arkad'yevich, dotsent, kand.geograf.nauk; DOROSHKEVICH, Lyudmila Ivanovna, dotsent, kand.geograf.nauk; YEFIMOVA, Yelena Semenovna, kand.geograf.nauk; LAVROV, Sergey Borisovich, dotsent, kand. geograf.nauk; LEDOVSKIKH, Stepan Ivanovich, dotsent, kand.geograf. nauk; NEVEL'SHTEYN, Grigoriy Solomonovich, dotsent, kand.geograf. nauk; NIKOLAYEVA, Nadezhda Vasil'yevna, dotsent, kand.geograf.nauk; OGANESOV, Vladimir Artem'yevich, kand.geograf.nauk; PINKHENSON, Dmitriy Moiseyevich, dotsent, kand.geograf.nauk; POSPELOVA, Nataliya Georgiyevna, prof., doktor ekonom.nauk; SEMEVSKIY, Boris Nikolayevich, prof., doktor geograf.nauk; SUTYAGIN, Pavel Grigor'yevich, dotsent, kand.geograf.nauk; SHTEYN, Viktor Moritsovich, prof., doktor ekonom.nauk; YEROFEYEV, I.A., red.; SMIRNOVA, N.P., red.; TYUTYUNNIK, S.G., red.kart; BORISKINA, V.I., red.kart; KOZLOVSKAYA, M.D., tekhn.red.

[Economic geography of foreign countries; student manual] Ekonomicheskaia geografiia zarubezhnykh stran; posobie dlia studentov. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 702 p. # maps (MIRA 13:12)

(Geography, Economic)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

TANANAYEV, I.V.; GALKIN, N.P.; SAVCHENKO, G.S.; SUTYAGIN, V.M.

Interaction of $UCl_4$ and $U(SO_4)_2$ with NaF in aqueous solutions. Zhur. neorg.khim. 7 no.7:1675-1680 Jl '62. (MIRA 16:3)
(Uranium chloride) (Uranium sulfate) (Sodium fluoride)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V.

Hundreds of voluntary helpers. NTO 5 no.9:54-56 S '63. (MIRA 17:6)

1. Chlen soveta Obshchestvennogo konstruktorskogo byuro Ural'skogo zavoda tyazhelogo mashinostroyeniya imeni Ordzhonikidze.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

ACC NR: AP6025662 (A) SOURCE CODE: UR/0413/66/000/013/0128/0128

INVENTOR: Sutyagin, V. A.

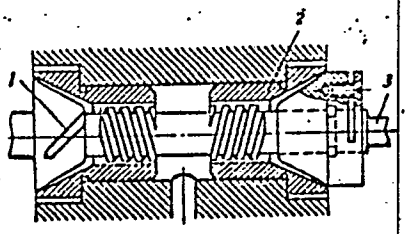
ORG: None

TITLE: Radial-thrust plain bearing with an air cushion. Class 47, No. 183543 [announced by the Izhevsk Machine Building Plant (Izhevskiy mashinostroitel'nyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 128

TOPIC TAGS: journal bearing, air lubricated bearing

ABSTRACT: This Author's Certificate introduces a radial-thrust plain bearing with an air cushion which uses a tapered bushing. A shaft with a tapered surface is set in this bushing. The cylindrical part of the shaft is threaded. The carrying capacity of the bearing is increased by forming slots on the tapered support surface. These slots are cut at a negative angle to that of the shaft threads and pass through only a part of the tapered support surface.




1—slots; 2—bushing; 3—shaft

SUB CODE: 13/ SUBM DATE: 05Apr65

UDC: 621.822.5

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

MOROSHKIN, B.F., prof.; KOSTINA, A.A., kand. veter. nauk; IVANSKIY, Ye.F., kand. veter. nauk; SUTYAGIN, V.S., kand. veter. nauk

Hemopoiesis in experimental fasciolosis. Veterinariia 41 no.10:71-72 O '64. (MIRA 18:11)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V. Ya.

Technology

Homemade televisor, Moskva, Gosenergoizdat, 1951.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 1953, Uncl.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

MR

L

486-L. Porosity of Electrodeposited Nickel. (In Russian.) A. A. Sulaginn and A. P. Vagramian. *Zhurnal Prikladnoi Khimii*, v. 24, Sept. 1951, p. 945-950.

The influence of thickness of deposit, current density, and various surface-active materials was investigated. Some materials were found to increase and others to decrease the number of pores. Up to a limiting value, porosity decreases with increasing thickness. The porosity-current density curve passes through a minimum. Data are charted. 11 ref. (L17)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTIYAGIN, V. Ya.

"Amateur Television Receivers," 1952

This book includes a description of how to construct a television receiver using the frequency for channel 1 (49.75 mc for picture and 56.25 for voice). The operation is based on a minimum of tubes and for a distance of not more than 15 or 20 kilometers from the transmitting station. This receiver does not utilize an intermediate frequency. The recommended screen radius for the kinescope circular tube is nine inches.

LXI

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V.YA.

SUTYAGIN, V.Ya.; BERG, A.I., redaktor; DZHIGIT, I.S., redaktor; YELIN, O.G., redaktor; KULIKOVSKIY, A.A., redaktor; MOZHZHEVELOV, B.N., redaktor; SMIRNOV, A.D., redaktor; TARASOV, F.I., redaktor; TRAMM, B.F , redaktor; CHECHIK, P.O., redaktor; SHAMSHUR, V.I., redaktor; KRIVOSHEYEV, I.I., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor.

[Circuits of television receiver scanning devices] Skhemy razvertyvaiushchikh ustroistv televizionnykh priemnikov. Moskva, Gos. energ. izd-vo, 1954. 93 p. (Massovaia radiobiblioteka, no. 199) (MLRA 7:9)
(Television--Receivers and reception)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V. Ya.

KULIKOVSKIY, A.A.; SUTYAGIN, V.Ya., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[New developments in amateur radio receivers] Novoe v tekhnike liubitel'skogo radiopriema. 2-e izd., perer. Moskva, Gos. energeticheskoe izd-vo, 1954. 174 p. (Massovaia radiobiblioteka, no.207) [Microfilm] (MLRA 8:3)

(Radio-Receivers and reception)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

9(2) SOV/112-59-3-5938

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 241 (USSR)

AUTHOR: Sutyagin, V. Ya.

TITLE: Temperature-Compensated Transistorized Power Amplifiers (Usiliteli moshchnosti na kristallicheskikh triodakh s termokompensatsiyey)

PERIODICAL: V sb.: Poluprovodnikovyye pribory i ikh primeneniye. Nr. 1, M., "Sov. radio," 1956, pp 354-401

ABSTRACT: Properties of common-emitter circuits are considered whose parameters are: $G_{11} = Y_{be} + Y_{bk} \cong Y_{be}$; $G_{21} = S - Y_{bk} \cong S$; $G_{12} = -Y_{bk}$; $G_{22} = Y_{ke} - Y_{bk} \cong Y_{ke}$ with $Y_{bk} \ll Y_{be}$; $Y_{bk} \ll Y_{ke}$; $Y_{bk} \ll S$. Plots are presented of transistor parameters against the voltages $U_k$ and $U_b$, as well as a plot of the power amplification factor against $U_b$. Simple and push-pull output stages are designed graphically. For a simple stage such value of $U_{b_0}$ should be selected which corresponds to not very curved static

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characteristic $i_k(u_b)$ with $u_k = U_{ko}$. After $U_{mvkh}$ and the operating point are selected on the basis of the static characteristic $i_k$, $u_k$ family, the dynamic characteristic should be plotted, $R_n$ determined, and $P_{vykh}$ calculated. Then, the nonlinear-distortion factor $k_f$, $I_{sr}$, and the stage efficiency $\eta = P_{vykh}/I_{sr}U_{ko}$ should be computed. The resistance $R_{vkh}$ is determined from the dynamic characteristic $i_b(u_b)$: $R_{vkh} = \mathrm{ctg}\,\varphi$, where $\varphi$ is the angle of slope of a tangent to the dynamic characteristic at the operating point. The signal power consumed by the transistor is $P_{vkh} = U^2_{mvkh}/2R_{vkh}$. The class AB operation of the push-pull stage can also be designed graphically. First, such a maximum base voltage value $U_{b_{maks}}$ is selected that no serious nonlinear distortion and no large losses in the base circuit would occur. Having selected $U_{ko}$ so that $P_{k_{maks}} \ll P_{k\,dop}$, a dynamic characteristic on the basis of $i_k(u_k)$ family is plotted and the operating point $U_{bo}$ is selected. The



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SOV/112-59-3-5938

Temperature-Compensated Transistorized Power Amplifiers

oscillatory power is $P_k = I_{smaks}(U_{ko} - U_{kmin})/2 \cong I_{smaks} U_{ko}/2$ because $U_{kmin} = 0.3 - 0.5$ v; the load resistance to the total current is $r_{k_s} = U_{ko}/I_{smaks}$; the input power is $P_{vkh} = P_b + P_{sh} = S_b[U_{mb}/(1 + S_b R_g)]^2 + 2U_{mb}/R_{sh}$, where $S_b$ is the transconductance of the perfect characteristic ($S_b = 1/R_b$); $R_g$ is the $R_{vykh}$ resistance of a preceding stage in terms of the input-transformer secondary and allowing for $R_{sh}$. To reduce nonlinear distortion, the resistance should be assigned $R_{sh} \ll R_{vkh}$ at $U_{bmaks}$. Then the dynamic characteristic for the component currents $i_k' - i_k'' = i_s = f(u_{b\sim})$ should be plotted, and $K_f$ and $\eta$ should be found. To design a power amplifier for functioning within a wide temperature range, it is necessary to allow for transistor-parameter variations which almost follow a linear law. Having designed the amplifier on the basis of a curve family corresponding to the room temperature, the temperature-compensating components should be designed on

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SOV/112-59-3-5938

Temperature-Compensated Transistorized Power Amplifiers

the basis of static characteristics $i_k = f(u_b)$ with $U_{ko}$ = const for various $t^o$. The latter can be obtained from the room-temperature static characteristics by applying an empirical formula $i_{k\Delta t} = \Delta t/3\sqrt[3]{i_k u_b S} - 2I_k$, where $\Delta t$ is the temperature rise over the room temperature. An $R_e$, $S_e$ chain should be connected to the emitter circuit for purposes of temperature compensation. The output power can be maintained $P_{vykh}$ = const with changing input voltage $U_{tb}$ that can be computed for the maximum positive temperature. $U_{tb}$ can be adjusted by electromechanical means or a thermistor-type divider can be used at the circuit input. Examples of graphical design of temperature-compensated amplifiers are cited.

V.I.A.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V.Ya.

9(4) p.3 PHASE I BOOK EXPLOITATION SOV/1778

Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Moskovskoye pravleniye

Tranzistornaya elektronika v priborostroyenii; sbornik trudov konferentsii (Transistor Electronics in the Instrument-making Industry; Collection of Conference Transactions) Moscow, Oborongiz, 1959. 289 p. 1,400 copies printed.

Ed.: N.I. Chistyakov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: S.D. Khametova; Tech Ed.: V.P. Rozhin; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: The book is intended for scientific and engineering personnel of the instrument-making and radio industries engaged in the development of electronic and radio equipment.

COVERAGE: The authors of this collection of articles discuss the theory, principle of operation, calculation and application of electronic circuits using transistors. They also

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feedback. Operation of circuits used for experimentally determining transistor parameters is also discussed. There are 4 references of which 2 are Soviet, and 2 English

N.K. Povarov, Candidate of Technical Sciences. Electronic Devices Fed by Current Generators 25

The author describes the static and dynamic characteristics of nonlinear elements and discusses their equivalent circuits. He also describes the operation and characteristics of vacuum phototubes, vacuum-tube amplifiers, transistors, cascade amplifiers, and oscillators connected to a current generator. There are 8 references of which 7 are Soviet and 1 English.

V. Ya. Sutyagin, Engineer. Average-current Transistor Amplifiers 39

The author discusses the operation and characteristics



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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

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SOV/142-2-3-20/27

9(2,3)

AUTHORS: Kulikovskiy, A.A., Potryasay, V.F., Sutyagin, V.Ya., Ryzhkov, A.S.

TITLE: The Terminology in the Field of Transistor Electronics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 3, p 378 (USSR)

ABSTRACT: The authors refer to the article by T.M. Agakhanyan, B.N. Kononov and I.P. Stepanenko, titled "The Terminology in the Field of Transistor Electronics", published in Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1958, Vol 1, Nr 4. The authors agree in principle with the suggestions made in the aforementioned article and present some of their own ideas as an addition. For example the Russian terms "baza" (base) and "tranzistor" (transistor) should be sanctioned, although there might be some conflict with the term "poluprovodnikovyy diod" (semiconductor diode) which also belongs to the transistor class. The authors regard the terms "dyrochnyy tranzistor" ('hole' transistor) and "elektronnyy tranzistor" ('electron' transistor) as superflous and recommend the designation p-n-p or n-p-n transistor. Similar suggestions were made for the classification of diode types.

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S/194/61/000/008/049/092
D201/D304

9,4310 (1139,1143,1159)

AUTHORS: Potryasay, V.F., Ryzhov, A.S. and Sutyagin, V.Ya.

TITLE: Transistor noise

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 14, abstract 8 D98 (V sb. Poluprovodnik. pribory i ikh primeneniye, v. 5, M., Sov. radio, 1960, 107-158)

TEXT: It is shown that the noise factor F should be taken as the basic factor determining the noise properties of transistor amplifiers. Possibilities are considered of replacing the transistor noise by a noisy four-pole of the equivalent transistor circuit, having internal noise sources. The bloc-diagram is given for measuring the noise parameters. Formulae are given for evaluating F in the region of white noise and at HF from the equivalent circuit of Giacoletto, containing 4 uncorrelated noise sources corresponding to the following: Thermal noise of the ohmic base resistance; shot

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGIN, V.S.

USSR/Zooparasitology - Tics and Insects (Disease Transmitters) P-3

Abs Jour : Referat Zhur - Biologii, No 16, 1957, 70194

Author : Dudkina, M.S., Sutyagin, V.S.
Inst : Sb. nauch. L'vovsk. n.i. In-ta epidemiol. mikrobiol. i gigieny. L'vovsk. Un-t 1956, 63-71
Title : Ecology An. bifurcatus in L'vov Region

Orig Pub : See Inst.

Abstract : In the Lvov region, the Anopheles bifurcatus is widely distributed in the habitations of the raised hilly region where it constitutes by day count 13-16% of the total number of mosquitoes. Hatching places- spring and subsoil fed, temporary rain puddles with a T. of 17-23 deg C. Larvae of all ages hibernate (mainly III) in unfrozen swampy areas of streams and fish-ponds. In the course of a season there are 3-4 generations; there is no decrease in the summer.
In cool, moist years, the large number of mosquitoes is

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

GRIGOROV, O.N.; SUTYAGIN, Ye.I.

Analytical method for the determination of the number of transfer through membranes. Vest. LGU 18 no.22:163-165 '63.

Transfer number of ions in aluminum oxide films as dependent on current direction and density. Ibid.:165-167 (MIRA 17:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

GRIGOROV, O.N.; SUTYAGIN, Ye.I.

Effect of concentration changes in membranes on the velocity of electroosmotic transport. Vest. LGU 19 no.16:104-109 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SIDOROVA, M.P.; SUTYAGIN, Ye.V.

Influence of concentration polarization upon the electrochemical activity of membranes. Vest. LGU 19 no.22:82-87 '64 (MIRA 18:1)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.

*Porosity of Nickel Electrodeposits. A. A. Sutyagina and [illegible]

[illegible]

porosity decreasing sharply until the thickness reached a certain critical value (~15–[illegible] μ); at greater thicknesses the number of pores remained approx. const. [illegible]

[illegible]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

USSR/Chemistry - Electrochemistry, May/Jun 52
Nickel

"The Effect of Alternating Current on the Electrodeposition of Nickel," A. T. Vagramyan, A. A. Sutyagina, Inst of Phys Chem, Acad Sci USSR

"Iz Ak Nauk, Otdel Khim Nauk" No 3, pp 410-414

On application of above certain current densities, the structure of the deposit becomes macrocryst. The number of pores in the electrolytic Ni deposit decreases. With increased frequency of the ac, its action gradually ceases. A possible mechanism of

220T5

the action of ac on the change of the structure of the deposit and on overvoltage in discharge of Ni ions is suggested.

SUTYAGINA, A. A.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A. A.

2

Structure of Copper Deposits K. M. Gorbunova and A. A. Sutyagina (Zhur. Fiz. Khim. [illegible]

2

[illegible] diminishes gradually and at [illegible] resulting deposit being similar [illegible]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYACINA, A.A.

SUTYACINA, A.A. "The Effect of Alternating Current on the Processes of Electrocrystallization of Certain Metals." Acad Sci USSR. Inst. of Physical Chemistry. Moscow, 1956. (Dissertation for the Degree of Candidate in Chemical Science)

So: Knizhnaya Letopis', No. 18, 1956,

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

S/564/57/000/000/003/029
D258/D307

AUTHORS: Gorbunova, K. M., Popova, O. S., Sutyagina, A. A., and Polukarov, Yu. M.

TITLE: Mechanism of growth and structure of metallic deposits formed during electrocrystallization

SOURCE: Rost kristallov; doklady na Pervom soveshchanii po rostu kristallov, 1956 g. Moscow, Izd-vo AN SSSR, 1957, 58-66

TEXT: The present article is a review of some of the authors' earlier studies and other work; attention is focused on some regularities concerning the cathode deposition of metals, as dense or porous, dendritic, coatings. An increase in the electrolysis current leads to an increase in the surface of the crystallizing metal, leading to an increase in the number of crystals or to dendritization, according to conditions. Powder deposition (fine dendrites) occurs at the saturation current.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

137-58-4-7842

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 211 (USSR)

AUTHORS: Gorbunova, K. M., Popova, O. S., Sutyagina, A. A., Polukarov, Yu. M.

TITLE: Mechanism of Growth and Structure of Precipitates of Metals Produced by Electrical Crystallization (Mekhanizm rosta i stroyeniye osadkov metalla, voznikayushchikh pri elektrokristallizatsii)

PERIODICAL: V sb.: Rost kristallov. Moscow, AN SSSR, 1957, pp 58-66

ABSTRACT: Certain principles of the growth on the cathode of an electrolytic cell of deposits (D) of metal in the form of dense coatings or loose dendritic structures are examined. K. M. Gorbunova shows that when single crystals are formed, an increase in current I results in the I/ΣS-K ratio remaining constant because of the increase in the surface of growth. This latter results in a transition from growth of the single crystal to the growth of multicrystalline D (a relatively high concentration of discharging ions occurs) or to a growth of dendritic D (a low concentration of discharging ions). Dense polycrystalline D grow when ΣS-S is attained at the cathode. Subsequently, further increase in I can occur only when there is

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137-58-4-7842

Mechanism of Growth and Structure (cont.)

a drop in the concentration of ions at the cathode. At a given I, the ion concentration at the cathode may prove to be close to zero: the maximum diffusion current is attained (MDC). Powder D form upon electrocrystallization under MDC conditions. The particles of the powder D are extremely fine dendrites, the angles between the branches of which are determined by the crystallographic nature of the metal. For Zn powder, the angle is 60°. In dense crystalline D the anisotropy of properties such as the magnetic, the linear compressibility, resistivity, thermal expansion, resistance to corrosion, etc., are determined by texture (orientation of all the crystals of the D in a given crystallographic direction). The authors hold that in the case of D with crystals above a certain size and small internal stresses (IS), it is more accurate to regard texture as "growth texture." Texture comes into being as the result of competition between crystals of different orientations, as the ionic building blocks brought up to the growing crystals are put to use. The change in the texture axis with change in the conditions of electrolysis is explained by the change in the ratios of the growth rates in different directions. The unique adherence of the texture of Zn and Cd D to a 6th-order axis [0001] c on application of an alternating current, with the surfaces bounded not by apices but by the faces of the base, may be explained in terms of the concepts developed by Kaishev and Bliznakov. X-ray and magnetic studies have made it possible to determine

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137-58-4-7842

Mechanism of Growth and Structure (cont.)

that IS anisotropy exists in Ni deposits, and also that the IS of Ni is not directly related to the amount of occluded $H_2$. Introduction of brightening agents in the bath leads to the formation of deposits not having the definite, clearly defined boundaries characteristic of crystals, and the D consist of rounded forms.

O. P.

1. Cathodes--Deposits--Structural analysis 2. Metals--Crystallization--Structural analysis

Card 3/3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

32-1-19/55

AUTHOR: Sutyagina, A.A.

TITLE: The Determination of Sulphur Impurities in Galvanic Precipitations of Nickel and Copper by the Radiochemical Method (Opredeleniye vklyucheniy sery v gal'vanicheskikh osadkakh nikelya i medi radiokhimicheskim metodom).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 43-44 (USSR)

ABSTRACT: In galvanoplastics organic compounds with a sulphur content are used for processes of precipitation. The metallic precipitations in this case contain the sulphur impurities [Ref. 1-4]. In order to determine them the method mentioned here is recommended as well as for the investigation of the galvanic precipitate of nickel (in the nickel bath) or copper (in the copper bath). As an indicator thiourea with a content of radioactive sulphur ($S^{35}$) is used. The nickel bath usually contains: 160 g/l $NiSO_4 \cdot 7H_2O$, 30 g/l $H_3BO_3$ and 10 g/l NaCl; the copper bath: 250 g/l $CuSO_4 \cdot 5H_2O$ and 10 g/l $H_2SO_4$. The thiourea content in the first case amounts to 0,1-0,4 g/l, and in the second case to 0,04-0,2 g/l. The activity of the initial solution is judged according to the "dry" sample,

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

The Determination of Sulphur Impurities in Galvanic Precipitations of Nickel and Copper by the Radiochemical Method 32-1-19/55

which is obtained by applying the solution on to a special plate and by vaporization. If the content of thiourea in the initial solution is known, and after the activity of this solution has been determined according to the "dry" sample, the content of sulphur in the metallic precipitate can be determined. This method was tested by chemical analysis and only slightly lower results were obtained which can be explained by the different manner of preparing the samples. There are 2 tables, and 6 references, 1 of which is Slavic.

ASSOCIATION: Institute for Physical Chemistry AN USSR (Institut fizicheskoy khimii Akademii nauk SSSR).

AVAILABLE: Library of Congress

Card 2/2 1. Sulfur-Impurities-Determination 2. Chemical analysis

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

76-32-4-9/43

AUTHORS: Gorbunova, K. M., Sutyagina, A. A.

TITLE: The Gloss of Electrolytic Deposits and its Connection With the Internal and External Structure of the Deposit (K voprosu o bleske elektroliticheskikh osadkov i svyazi yego s vnutrennim i vneshnim stroyeniyem osadka)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4, pp. 785 - 790 (USSR)

ABSTRACT: By changing the conditions of deposition an essential change of the crystal lattices is caused in many metals; this is made reason for the present paper to deal with the problem of the influence of geometric factors or the surface relief respectively on the gloss. It is assumed that the gloss is determined by the size of the crystals forming the deposit, and that they only shine when the crystal dimensions are sufficiently small. Similar statements were made by Wittum (Reference 1) and S. M. Kochergin (Reference 3,2) as well as by A. T. Vagramyan and Z. A. Solov'yeva (Reference 4,5). Wood (Reference 6) was the first to point out the connection between the gloss and the crystal orientation, while S. P. Makar'yeva (Reference 7)

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76-32-4-9/43

The Gloss of Electrolytic Deposits and its Connection With the Internal and External Structure of the Deposit

observed changes of the texture, just as well as V. I. Arkharov (Reference 8), L. S. Palatnik (Reference 9), V. I. Arkharov (Reference 8), G. F. Kosolapov and B. Yu. Mett (Reference 10), N. T. Kudryavtsev and B. V. Ershler (Reference 11) investigated electrodeposits of zinc. In the last years the opinion became popular which originated from K. M. Gorbunova et al. (Reference 12,13) that gloss is not clearly determined by the dimension and the character of mutual orientation of the crystals. This was also noticed in a similar way by Smith, Keeler and Read (Reference 14) as well as by Read and Weil (Reference 15) and Klark and Simonsen (Reference 16). In the present work the new data obtained by A. A. Sutyagina (Reference 19) are investigated and the influence of a.c. on the electrocrystallization of a number of metals is dealt with. As can be seen from the results and the mentioned figures the crystal dimension is no clear criterion for the gloss; some examples are given for this. A connection between the texture

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76-32-4-9/43

The Gloss of Electrolytic Deposits and its Connection With the Internal and External Structure of the Deposit

and the gloss was also not observed, and the assumptions by K. M. Gorbunova, T. V. Ivanovskaya and N. A. Shishakov (Reference 12) were proved. The electrochemical investigations of glossy and dead zinc depositions showed, however, that the increase of surface polish and the absence of sharp raisings increase the gloss so that a connection between the reflection coefficient and the surface relief is assumed. There are 8 figures, 1 table and 2o references, 13 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (Moscow Physico-Chemical Institute, AS USSR)

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

Card 3/3 1. Metals--Electrodeposition 2. Crystals--Lattices 3. Metals --Surface properties

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A006/A001

Some Regularities of Metal Electrocrystallization Under the Effect of A.C.

believe that in the case of Zn and Cd, the structural changes are connected with the surface activation of the anode current component as a result of the potential shift toward the anode zone; in the case of Ni, changes in the structure do not depend on the nature of surface-active additions and are caused by the difficult formation of Ni hydroxide in the layer near the electrode, due to H ionization and the accumulation of H+ ions during the anode pulses.

Z. Solov'yeva

Translator's note: This is the full translation of the original Russian abstract.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SOV/76-33-9-15/37

Electrocrystallization of Nickel by the Application of Alternating Current. I. Structure of Deposits From Electrolytes Not Containing Additions of Surface Active Substances

= 2 a/dm$^2$, frequency 50 cycles) differ but very little from those obtained with the direct current. With an increase in density of a.c. to 7.5 a/dm$^2$, however, the nickel deposit crystals grow to a great extent, and so does the change in texture (Figs 1-7), while reflection is diminished. In alternating current frequencies of 500 cycles the last mentioned changes are not observable. A strong change of the nickel deposit occurs only with the ratio: density of a.c./density of d.c. $>1$ and with lower frequencies of the alternating current, in which connection the acidity of the electrolyte plays an important part. Similar observations were made with the electrolyte 160 g/l $NiSO_4 \cdot 7H_2O$, 45 g/l $NiCl_2 \cdot 6H_2O$, 30 g/l $H_3BO_3$. Investigations were extended to the change in potential of nickel separation under the abovementioned conditions with the aid of a special apparatus (Fig 8), and a loop oscillograph. By the application of alternating current (50 cycles) the cathode potential changes according to a sinusoid, the axis of which shifts to more positive values (Table), as compared to the potential of nickel separation in the application of a direct

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SOV/76-33-9-15/37

Electrocrystallization of Nickel by the Application of Alternating Current. I. Structure of Deposits From Electrolytes Not Containing Additions of Surface Active Substances

current only. (Fig 9, oscillograms). There are 9 figures, 1 table, and 10 references, 7 of which are Soviet.

SUBMITTED: February 22, 1958

Card 3/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

05804
SOV/76-33-10-2/45

5(4), 18(7)

AUTHORS: Sutyagina, A. A., Gorbunova, K. M.

TITLE: Electrocrystallization of Nickel Under Alternating Current Conditions. II. Electrolytes With Additions of Surface-active Substances

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 10, pp 2128-2134 (USSR)

ABSTRACT: In continuation of a previous paper the effect exerted by surface-active substances on the electrocrystallization of nickel is investigated. The method already described (Refs 1-4) is employed. The alternating current electrodeposition of nickel was investigated in the presence of one of the following substances: glass-producing additions of the anionic type of 2,6 - 2,7-naphthalene disulfonic acid; additions the effect of which is based on the separation of sulfur ions in the solution (thiourea, allylthiourea); additions of the molecular type (formaldehyde); additions of the cationic type (aniline). Nickel deposits which were obtained at direct current ($D_G$ = 2 a/dm$^2$) from electrolytes with one of the above-mentioned substances have a lustrous surface on which no crystal faces

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Electrocrystallization of Nickel Under Alternating Current Conditions. II. Electrolytes With Additions of Surface-active Substances

were observed, not even with an EM-3 electron microscope (Fig 1). The radiographs of these deposits have blurred lines (Fig 2). The calculations of the radiographs carried out according to A. A. Sutyagina's method (Ref 4) showed that in the lustrous nickel deposits an X-ray diffraction pattern existed along the (001) axis. In accordance with data by K. M. Gorbunova, T. V. Ivanovskaya and N. A. Shishakov (Ref 5), an image with diffusion circles was obtained on electronograms (Fig 3) of nickel deposits resulting from solutions with an addition of 2,6 - 2,7-naphthalene disulfonic acid. At a ratio of $D_{a-c} : D_{d-c} > 1$ (alternating current of 50 cycles) a strong effect on the structure of the nickel deposit was observed; irrespective of the type of additions, in most cases nickel deposits were obtained with an X-ray diffraction pattern along the (001) axis. Nickel deposits obtained at direct current ($D_G = 2$ a/dm$^2$) from electrolytes with additions of formaldehyde or aniline possessed weak reflexion (Table ), whereas nickel deposits from electrolytes with allylthiourea obtained at $D_G = 1 - 2$ a/dm$^2$ reflect strongly (Table). An increase of the

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SOV/76-33-10-2/45

Electrocrystallization of Nickel Under Alternating Current Conditions. II. Electrolytes With Additions of Surface-active Substances

alternating-current frequency reduces its effect so that at frequencies of 5,000 cycles the nickel deposits show the same structure as those obtained at direct current only. The experimental results are explained and the papers by A. A. Rotinyan, V. Ya. Zel'des (Ref 10), I. I. Zhukov, Z. D. Pigareva (Ref 11), N. A. Izgaryshev, S. Berkman (Ref 16) and Yu. M. Polukarov (Ref 17) are mentioned; a change of the adsorption conditions on the cathode is taken into consideration (at a potential shift) as well as a change of the $H^+$-ionic concentration on the cathode (caused by a periodic change of the cathodic and anodic process). There are 8 figures, 1 table, and 17 references, 14 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Academy of Sciences of the USSR, Institute of Physical Chemistry)

SUBMITTED: February 22, 1958

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

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On the Problem of the Mechanism of Sulfur Inclusion in Electrodeposits

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B004/B011

changes. The determination of the sulfide content in the nickel deposits showed that most of the sulfur was present as sulfide, with the stoichiometric ratio not corresponding to any known sulfide. Such a formation of sulfur-enriched sulfides, whose additional sulfur was bound but loosely, had already been mentioned in reference 7. On the other hand, but little sulfide sulfur was found in the case of zinc. The largest portion of sulfur is present in the electrolytic zinc deposit in the form of unchangedly adsorbed molecules of the added substance. The particular behavior of nickel is explained by the circumstance that freshly electrodeposited nickel contains hydrogen, and therefore approaches Raney nickel as to its properties, the latter being known to be capable of separating sulfur from organic and inorganic compounds in a quantitative manner (Ref 9). There are 1 table and 9 references, 8 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

PRESENTED: November 10, 1959 by A. N. Frumkin, Academician

SUBMITTED: October 5, 1959

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.; GORBUNOVA, K.N. (Moskva)

Electrocrystallization of some metals in the presence of the additions of sulfur-containing surface active agents. Part 1: Effect of the electrolysis conditions on the amount of impurities in zinc deposits, and the mechanism of their incorporation. Zhur.fiz.khim. 35 no.8:1769-1773 Ag '61. (MIRA 14:8)

1. Institut fizicheskoy khimii AN SSSR.
(Zinc—Plating)
(Sulfur organic compounds)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

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29985
S/076/61/035/011/006/013
B110/B147

AUTHORS: Sutyagina, A. A., and Gorbunova, K. M. (Moscow)

TITLE: Study of the electrocrystallization process of some metals in the presence of sulfur-containing surface-active admixtures. II. Effect of the conditions of electrolysis on the amounts of impurities in nickel deposits and the properties determined by the above conditions

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 11, 1961, 2514-2523

TEXT: The dependence of the composition of Ni deposits on the type and concentration of admixtures, the acidity of the solution, and the current density at the cathode were studied to elucidate the nature of electrodic processes leading to the formation of indistinctly crystalline deposits. A solution of 160 g/liter of $NiSO_4 \cdot 7H_2O$, 30 g/liter of $H_3BO_3$, and 10 g/liter of NaCl with different pH values was used as electrolyte. Thiourea, allyl thiourea, β-sulfonaphthalic acid, 2,6- 2,7-disulfonaphthalic acid, α-naphthol disulfonic acid, α-naphthol sulfonic acid, sodium thiosulfate, thiosalicylic acid, diphenyl thiourea, and potassium thiocyanate were used as admixtures. The amount of occluded sulfur increases with increasing

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concentration of the admixture in acid electrolytes yielding larger amounts of occluded sulfur. The sulfur content is decreased by an increase of current density. The sulfur content is less when admixtures containing sulfur on a benzene ring or bound to oxygen are used. Since the overall-sulfur-to-carbon ratio is higher than in the organic admixtures, chemical conversions are assumed to take place in the deposit. Irrespective of the structure of the admixture, $\geqslant$90% of S is bound to Ni as sulfide. The higher carbon content probably caused by adsorption of the conversion products of the initial admixture is explained as being due to the removal of S from organic compounds by freshly deposited, $H_2$-saturated Ni (similar to Raney nickel). A temperature increase leads to an increase of the S content, despite of the desorption of surface-active agents. S-Ni ratio in the deposit was several times found to be equal to 2.5. The constant ratio found after extraction with $CCl_4$ and acetone indicates a loose chemical bond since the S-Ni ratio falls to 0.5-0.7 on heating to 130°C. X-ray analysis revealed a structural change at 400-450°C: After a reaction time of 1.5 hrs in the solid state, Ni and $Ni_3S_2$ were formed from the nickel and the high-sulfur primary sulfide phases under exothermic conditions (as has been thermographically established). Heat absorption at 600°C is due to



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B110/B147

Study of the electrocrystallization ...

the melting of a eutectic mixture consisting of Ni and the decomposition products of $Ni_3S_2$. The melting point of Ni is lowered by the occlusion of sulfur. The reflection coefficient of Ni deposits obtained from low-acidity electrolytes is lowered. Gloss is, however, not directly dependent on the sulfur content. The reflection coefficient is also raised when the current density is increased. The hardness of an Ni deposit obtained at 1.4 a/dm$^2$ (pH = 5.5), which was measured with a ПМТ-3 (PMT-3) device was about 210 kg/mm$^2$, that of an Ni deposit containing 0.69% S, prepared with 0.1 g/liter of thiourea (TU), was about 570 kg/mm$^2$. With increasing current density (2.6 a/dm$^2$), hardness at 0.1 g/liter of TU and at a sulfur content of about 0.42% decreases to 456 kg/mm$^2$, while it is increased in the absence of admixture (about 310 kg/mm$^2$ at 3.3 a/dm$^2$). At a sulfur content of about 5%, a change in the lattice constant of Ni by about 0.04% occur. Deposits from electrolytes with pH values of 2.5 to 2.6 and low current densities as well as from electrolytes with pH values of 5.5 and with TU additions of 0.3 to 0.5 g/liter showed no texture. Deposits obtained at high current densities from electrolytes with a pH value of about 5.5 and containing 0.1 to 0.2 g/liter of TU as well as from higher-acidity electrolytes showed textures oriented parallel to [001]. In the

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.; GORBUNOVA, K.M.; GLAZUNOV, M.P.

Mechanism of chemical nickel plating reaction. Dokl. AN SSSR 147 no.5:1133-1136 D '62. (MIRA 16:2)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom V.I. Spitsynym.
(Nickel plating) (Reduction, Chemical)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.; GORBUNOVA, K.M.; GLAZUNOV, M.P.

Reaction mechanism of nickel reduction by hypophosphite studied with the aid of deuterium as tracer. Part 1: Solutions without organic additives. Zhur. fiz. khim. 37 no.9:2022-2026 S '63. (MIRA 16:12)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.; GORBUNOVA, K.M.; GLAZUNOV, M.P.

Study of the mechanism of nickel reduction by hypophosphite with the use of deuterium as tracer. Part 2: Reduction of nickel in hypophosphite solutions with organic acid salts added. Zhur.fiz.khim. 37 no.10:2214-2219 O '63. (MIRA 17:2)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYAGINA, A.A.; GORBUNOVA, K.M.

Mechanism of phosphorus inclusion in the chemical reduction of some metals by hypophosphite. Zhur. prikl. khim. 37 no.8:1676-1681 Ag '64. (MIRA 17:11)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

VAGRAMYAN, A. T.: SUTYAGINA, A. G.

Nickelplating

Effect of the alternating current on electrodespostion of nickel.
Ixv. AN SSSR Otd. Khim. nauk No. 3, 1952

9. Monthly List of Russian Accessions, Library of Congress, November 1952 Uncl.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

5(0)

AUTHORS: Mashovets, V. P., Ponomareva, A. M. SOV/153-2-2-31/31

TITLE: Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 (Khronika. Vsesoyuznyy konkurs na luchshuyu studencheskuyu rabotu po khimii i khimicheskoy tekhnologii za 1957-1958 uchebnyy god)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 303-304 (USSR)

ABSTRACT: The Ministerstvo vysshego obrazovaniya SSSR (Ministry for University-education of the USSR) carried out the competition mentioned in the title, within the framework of the Studencheskiye nauchnyye obshchestva (Scientific Student Societies) covering 37 subjects of science, technology, arts, and culture. The Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet) was entrusted with the subject "Chemistry and Chemical Technology". A commission was formed consisting of Professor V. B. Aleskovskiy, V. P. Mashovets (Chairman), I. P. Mukhlenov, A. A. Petrov, B. A. Poray-Koshits, Docent P. A. Yablonskiy, and Candidate of Chemical Sciences A. M. Ponomareva (Secretary). The following persons acted as critics: The Professors A. P. Alabyshev, A. M. Ginstling, I. S. Ioffe, M. I. Khyaginichev, L. Ya. Kremnev, A. S. Kusov, A. M. Malkov, I. N. Maslenitskiy, K. P. Mishchenko, Ya. V. Morachevskiy, with the collaborators, N. N. Nepenin, ~~Ya. K. Novodranov, V. V. Perekalin, A. I. Rotinyan, A. V.~~ Zatalkin, A. V. Storonkin, and T. A. Favorskaya with collaborators, A. N. Khaletskiy; Docents: A. Ye. Akim, L. M. Batuner, N. I. Gil'dengorshel', O. F. Ginzburg, I. A. D'yakonov, S. G. Zhavoronok, S. N. Zhilov, Ye. S. Roskin, P. N. Sokolov, N. P. Starostenko, N. N. Sychev, A. T. Trembchenko; Chief scientific researcher B. P. Ioffe; Candidates of Sciences: G. A. Bel'chenko, N. K. Ryazyeva, O. N. Setkina, B. P. Yur'yev; Engineers: Kostyreva, Senyusheva, and Yarmolinskiy. The paper "Synthesis and Self-oxidation of the p-Di-Secondary Butyl-benzene" by V. S. Zavgorodniy, Fifth-year student of the Voroneshskiy gosudarstvennyy universitet (Voronezh State University) was awarded a medal for being the best. The second candidate for the medal is the Fifth-year-student of the Kiyevskiy gosudarstvennyy universitet (Kiyev State University) K. F. Lyashev. He submitted the paper "Kinetics of the Non-stationary Catalytic Decomposition-process of Hydrogen-peroxide on Platinum". The third medal was awarded to the Fourth-year-students of the Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Chemical-technological Institute): D. V. Nebova, A. I. Sotnikova, T. T. Simagina, and E. N. Sutyagina for the paper: "Method of Continuous Regeneration of Zinc-chloride From Waste Water of the Kineshma Fibre Factory". Besides these three papers, the commission selected further 8 papers which deserve publication owing to their maturity and originality. The papers are: "Utilization of Phosphorous Gypsum for the Production of Local Construction-binding Materials" by the Fourth-year-students of the Ivanovo Institute (see above): A. V. Tochilova and A. A. Fadeyeva; "Study of the Influence of the Dispersion of Polymer Particles, When Being Disintegrated, on the Molecular Weight" by the Third-year-student of the Moskovskiy

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Card 3/5

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Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 SOV/153-2-2-31/31

tekhnologicheskiy institut legkoy promyshlennosti (Moscow Technological Institute for Light Industry) V. N. Gorodilov; "Study of the Cathodical Polarization at the Precipitation of Chromium From Sulphide-solutions" by the Fifth-year-student of the Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute) V. G. Petropavlovskiy; "Gold Extraction From Watery Cyanide-solutions" by the Fifth-year students of the Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemical-technological Institute imeni D. I. Mendeleyev) A. V. Ochkin, V. A. Borisov, and M. Mrnk; "Some Investigations of the Vulcanisates of Rubbers Containing Carboxyl" by the Fourth-year-students of the Yaroslavskiy tekhnologicheskiy institut (Yaroslavl' Technological Institute) G. I. Komarova and T. A. Shchadricheva; "Investigation of the Cathodic and Anodic Processes at Gold-plating" by the Fifth-year-student of the Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet) R. A. Nosova; "Spectral Determination of Molybdenum and Tungsten in Tri-hetero-polyacids" by the Third-year-student of the Kishinevskiy gosudarstvennyy universitet (Kishinev State University) V. A. Dagarev; "Capture of Dichlorine-ethane by Bone-fat in Foam-condition" by the Fourth-year-students of the Kazanskiy khimiko-tekhnologicheskiy institut (Kazan' Chemical-technological Institute) L. I. Yashina, R. A. Nurutdinov, and T. G. Sirazhev. Taken collectively, the competition has shown a high standard of the scientific research work in the circles of the Studencheskoye Nauchnoye obshchestvo (Scientific-student-societies) of many universities.

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L 24857-66 EWT(m)/EWP(v)/EWP(j)/T WW/RM

ACC NR: AP6009441 (A) SOURCE CODE: UR/0377/65/000/003/0041/0048

AUTHORS: Umarov, G. Ya. (Candidate of physico-mathematical sciences); Vil'kova, S. N.; Ayzenshtat, Ye. L.; Novikova, I. A.; Sutyagina, V. M.

ORG: Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR)

TITLE: Producing aluminum mirrors on asbestos cement by the conversion method

SOURCE: Geliotekhnika, no. 3, 1965, 41-48

TOPIC TAGS: solar energy conversion, metal plating, asbestos product, aluminum, epoxy plastic, resin, light reflection coefficient/ ED-5 resin

ABSTRACT: The use of low-cost asbestos cement as the body of solar concentrators is described. Epoxy resin ED-5 is used to create a smooth surface on one side of the cement for metallization. This resin shows a small shrinkage as compared with other materials. The resin (15--20 g) with 8% hardener was applied to a 12 x 6-cm plate of asbestos cement and was pressed with a steel beam weighing 3 kg. It was shown that an optically accurate mirror surface can be created by the conversion method (see Fig. 1). A study of the mirror layer showed that its adhesion

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ACC NR: AP6009441

Fig. 1. Reflection factor before and after (dotted and continuous curves) conversion versus amount of faience flour (a), graphite (b), and sawdust (c) added to resin.

exceeded by a factor of 5--6 the adhesion of a mirror surface produced by vaporization in a vacuum. Causes of fogging of the reflecting surface with time are explained, and methods of their elimination are shown. Orig. art. has: 5 photographs, 1 graph, and 1 table.

SUB CODE: 10, 20/ SUBM DATE: 23Apr65/ ORIG REF: 002

2/2 dda

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

18.7530

SOV/126-7-3-31/44

AUTHORS: Nakhutin, I. Ye. and Sutyagina, Ye. I.

TITLE: Absorption of Hydrogen by Palladium at Low Temperatures (Pogloshcheniye vodoroda palladiyem pri nizkikh temperaturakh)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 3, p 459 (USSR)

ABSTRACT: The rapid absorption of hydrogen by platinum black has enabled the authors to measure the isotherm of hydrogen absorption by palladium at - 78°C. In Fig.1 the results of three series of measurements are shown. The initial portion of the curve corresponds to the α-phase of the hydrogen-palladium solid solution; a horizontal portion of two-phase region follows, and the last portion rises steeply and corresponds to the β-phase of the solid solution. The pressure at which the phase transformation occurs is 0.015-0.018 mm Hg. The quantity of hydrogen dissolved at this pressure in the β-phase is 70-71 n. $cm^3$/g Pd. At a pressure of 13 mm Hg the quantity of dissolved hydrogen is about 82 n. $cm^3$/g Pd. ( H / Pd = 0.78). At - 120°C and a pressure of about 15 mm Hg the quantity of dissolved

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Absorption of Hydrogen by Palladium at Low Temperatures

hydrogen attained 86 n. $cm^3/g$ Pd ( H / Pd - 0.82). At - 196°C absorption of hydrogen proceeded very slowly The experiments, carried out in a closed circuit containing a given quantity of hydrogen and palladium, showed that the hydrogen absorption still continued after two days. The concentrations of hydrogen dissolved in palladium remained lower than those at - 78°C at the same pressures. It follows that the hydrogen-palladium system had not reached equilibrium as the solubility of hydrogen in palladium must increase with drop in temperature.
There is 1 figure, and 4 references of which 2 are Soviet and 2 English.

SUBMITTED: September 2, 1957

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, A. S.

Dissertation: "The Organization of the Basic Production Process in the Flour Mill." Cand Tech Sci, Moscow Technological Inst of the Food Industry, 28 Jun 54. (Vechernyaya Moskva, Moscow 18 Jun 54)

SO: SUM 318, 23 Dec 1954

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, A.S.; BORINEVICH, A.A., redaktor

[redacted]

[Organizing and planning enterprises of the flour-milling industry] Organizatsiia i planirovanie predpriiatii mukomol'noi promyshlennosti. Moskva, Izd-vo tekhn. i ekon. lit-ry po voprosam mukomol'no-krupianoi, kombikormovoi promyshl. i elevatorno-skladskogo khoziaistva, 1956. 226 p. (MLRA 10:9)

(Flour-mills)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, A.S., kand. tekhn. nauk.

Technical and organizational planning in flour and groats mills. Trudy MTIPP no.7:58-65 '57. (MIRA 10:12)
(Grain milling)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, B.V., voyennyy letchik pervogo klassa, podpolkovnik; SERIKOV, B.S., mayor.

Competition for the outstanding crew and the best flight unit. Vest.Vozd.Fl. 40 no.7:40-44 Jl '57. (MIRA 10:11)
(Russia--Air force)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTIRIN, A. N.

Dissertation: "Strength of Welds in the Process of Welding at Low Temperatures." Cand Tech Sci, Moscow Higher Technical School imeni Bauman, Moscow, 1953. Referativnyy Zhurnal--Khimiya, No 8, Apr 54.

SO: SUM 284, 26 Nov 1954

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, G.V., kand.tekhn.nauk

High-quality welding with semiconductor units. Izv.vys.ucheb.zav.; mashinostr. no.7:96-100 '60. (MIRA 13:11)

1. Moskovskoye vysshiye tekhnicheskoye uchilishche imeni Buamana.
(Electric welding)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, G.V., kand.tekhn.nauk; NIKOL'SKAYA, Z.A., inzh.

Introduction of mechanized welding methods at the Kaluga Machinery Manufacture. Svar.proizv. no.5:24-26 My '62. (MIRA 15:12)

1. Kaluzhskiy vecherniy fakul'tet Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (for Sutyrin).
2. Kaluzhskiy mashinostroitel'nyy zavod (for Nikol'skaya).

(Kaluga--Machinery industry)
(Electric welding--Equipment and supplies)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

L 62541-65 EWP(k)/EWA(c)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/T/EWA(d)/EWP(i)/EWP(v)/EWP(t)
Pr-4 JD/HM

ACCESSION NR: AP5017526 UR/3155/64/000/001/0008/0015

AUTHOR: Sutyrin, G.V. (Docent, Cand. of technical sciences); Lobitskiy, V.G. (Engineer)

TITLE: Unilateral spot welding of large equipment components

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Kaluzhskiy fakul'tet. Mashinostroyeniye, no. 1, 1964, 8-15

TOPIC TAGS: unilateral spot welding, large equipment element, cumbrous machine part, welding setup, welding gun, spot gun, low alloy steel, low carbon steel, high alloy steel, copper busbar, welding transformer

ABSTRACT: To facilitate the welding of cumbrous and large machine parts, the authors employed the principle of unilateral spot welding. Fig. 1 shows the diagram of the setup for this process. The welding current from secondary winding 10 of transformer 5 is admitted to weldment 4 by copper cable 3 and to welding gun 1 by cable 2. The pressure between the electrode and the weldment is created by the welder by pressing the handle of gun 1 and thus compressing

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ACCESSION NR: AT5017526

the spring inside the gun's housing and causing the contacts 4 of the switch to close. Thereupon, contactor 6 energizes transformer 5 and timing relay 7, thus automatically causing the welding process to commence. For greater flexibility and lighter weight, current-conducting cable 2 consists of copper cores with an overall cross section of approx. 40 mm$^2$ sheathed in a rubber hose through which cooling water is passed. Numerous experiments have shown that the welding gun (Fig. 2) can be successfully used to weld large work parts of low-carbon, low-alloy and high-alloy steels in cases where, for one reason or another, the conventional machines for spot welding in any spatial position cannot be employed. Unilateral single-spot welding with the aid of the spot gun can find broad application in the welding of sheets up to 2 mm thick to elements of considerable thickness (as much as 600 mm and more), which cannot be accomplished with [illegible] dart welding machines and pinch guns. This technique can [illegible] the length [illegible] exceed 3 m, [illegible]

copper-based [illegible]

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ACCESSION NR: AT5017526

and the attendant underwelding losses that may arise when the weldment is of large dimensions and the distance from the current source is considerable. The quality of the weldments thus obtained is sufficiently high. Orig. art. has: 2 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 02 SUB CODE: IE, MM

NO REF SOV: 000 OTHER: 000

Card 3/5

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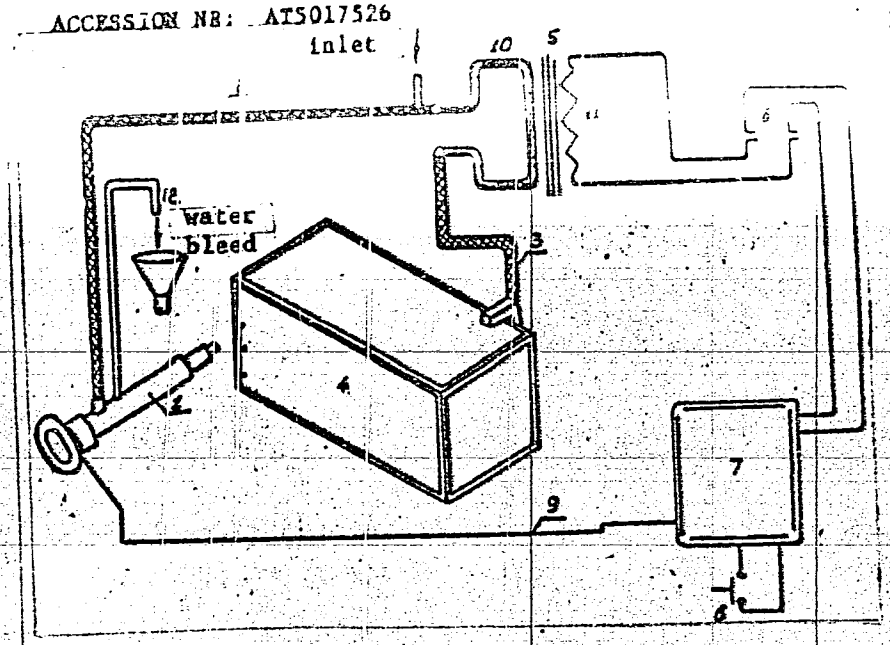


ENCLOSURE: 01

Fig. 1. Diagram of setup for unilateral single-spot welding of cumbrous parts: 1 - portable gun; 2 - water-cooled cable; 3 - noncooled cable; 4 - weldment; 5 - welding transformer; 6 - contactor; 7 - timing relay; 8 - switch; 9 - secondary winding of transformer; 11 - primary winding of transformer; 12 - water-bleed hose

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ENCLOSURE: 02

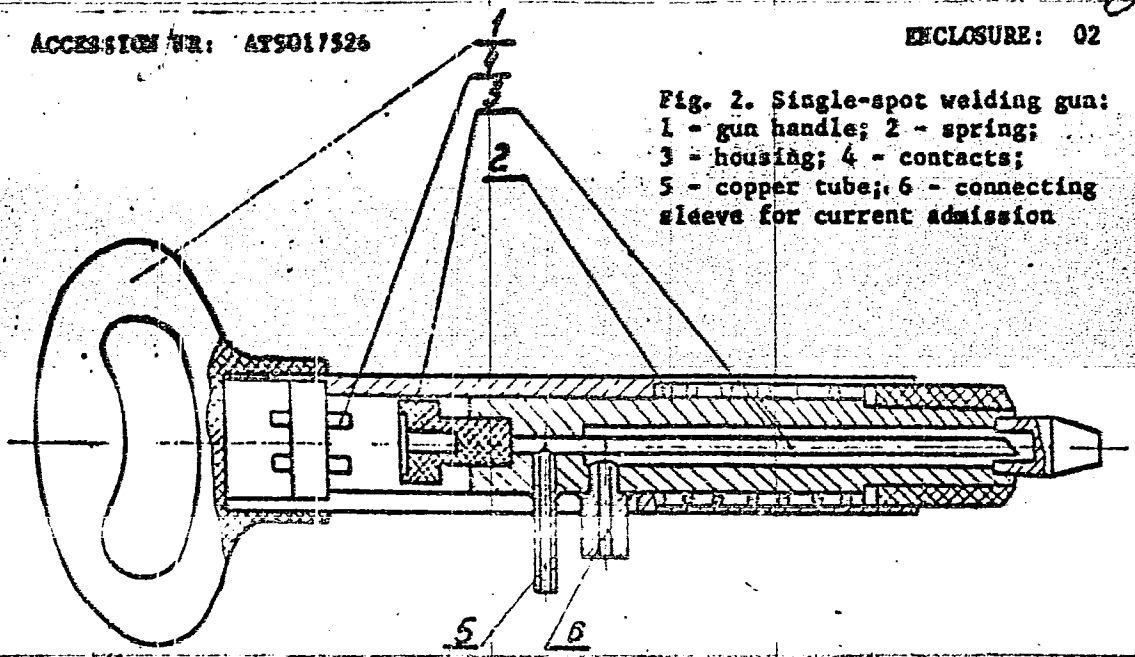


Fig. 2. Single-spot welding gun: 1 - gun handle; 2 - spring; 3 - housing; 4 - contacts; 5 - copper tube; 6 - connecting sleeve for current admission

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M., inzh.

Mechanizing the lowering of dried-out ships following salvage. (MIRA 15:9)
Rech. transp. 21 no.9:56 S '62.
(Dry docks) (Sluice gates)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M., inzh.

Do not omit the study of special sailing directions. Rech. transp. 21 no.10:46-47 O '62. (MIRA 15:10)

(Inland navigation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M., inzh.

Voluntary inspectors of shipping. Rech.transp. 21 no.11:42-43 N '62. (MIRA 15:11)

(Shipping)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M. A.

The steering gear of river vessels. Kuibyshev. Rechizdat, 1942. 219 p. (49-33935)

VK145.S8

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M. A.

"Manual for River-Pilot", published by State Publishers of River Transport Literature, Moscow, 1949

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, V.A.

Prakticheskoe posobie rulevomu (shturval'nomu). [Practical steering manual]. Izd. 2. Utverzhdeno v kachestve ucheb. posobiia dlia podgotovki rulevykh (shturval'nykh). Moskva, Izd-vo Ministerstva rechnogo flota SSSR, 1950. 290 p. illus.
Bibliography: p. [288].
First ed. published in 1942 under title: Rulevoi rechnogo sudna. DLC: VM841.S8 1950

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M. A.

Inland Navigation - Study and Teaching

Methods of training navigators.
Rech. Transp. 12, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, Mikhail Andreyevich; SEDOV, F.G., redaktor; MARKUSHINA, A.N., redaktor; BEGICHEVA, M.N., tekhnicheskiy redaktor

[Textbook for the training of helmsmen of river and lake vessels] Uchebnik dlia podgotovki rulevogo rechnykh i ozernykh sudov. Moskva, Izd-vo "Rechnoi transport," 1954. 242 p. (MLRA 8:6)
(Inland navigation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A., inzhener.

More on draft changes during the movement of ships. Rech.transp. 14 no.4:23-24 Ap '56. (MLRA 9:8)
(Displacement (Ships))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A.

PECHATIN, A.A., inzh.; BEN'KO, M.P.; KAMENSKIY, V.K.; KARTASHEV, R.D.; SUTYRIN, M.A.; FADEYEV, V.G., red.; IGOSHIN, M.G., red.; KARYAKINA, M.S., tekhn.red.

[Manual for helmsmen for lifesaving cutters] Posobie motoristu-rulevomu spasatel'nogo katera. Moskva, 1957. 188 p. (MIRA 11:5)

1. Vsesoyuznoye dobrovol'noyeobshchestvo sodeystviya armii, aviatsii i flotu.
(Navigation) (Motorboats)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A.

Do not allow ship breakdowns in 1957. Rech. transp. 16 no.3:4-5 Mr '57. (MLRA 10:4)

(Inland navigation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, Mikhail Andreyevich; GLAZKOV, M.M., red.; KHARYUKOV, N.A., retsenzent; ALEKSEYEV, V.I., red. izd-va; GORCHAKOV, G.N., tekhn. red.

[Safety in pushing barges with towboats] Bezopasnoe vozhdenie sudov sposobom tolkaniia. Moskva, Izd-vo "Rechnoi transport," 1958. 40 p. (MIRA 11:8)
(Tugboats)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

NAUMOV, Aleksandr Ivanovich; SUTYRIN, M.A., retsenzent; SOLOV'YEV, V.B., red.; ALEKSEYEV, V.I., red. izd-va; SALAZKOV, N.P., tekhn. red.

[For the assistance of the young boat handler] V pomoshch' molodomu sudovoditeliu. Moskva, Izd-vo "Rechnoi transport," 1958. 169 p. (MIRA 11:9)
(Inland navigation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

BEKMAN, Al'fred Andreyevich; ROSTISLAVINA, K.V., red.; SUTYRIN, M.A., retsenzent; KUSHCH, L.K., retsenzent; ALEKSEYEV, V.I., red. izd-va; TSVETKOVA, S.V., tekhn. red.

[Manual for ship handlers in inland navigation] Posobie dlia sudovoditelia ozernogo plavaniia. Izd.2., dop. i perer. Moskva, Izd-vo "Rechnoi transport," 1958. 185 p. (MIRA 11:8)
(Inland navigation) (Ship handling)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A.

FILYASOV, K.A., otvetstvennyy za vypusk; VAKHTUROV, A.N., red.; SOLOV'YEV, I.F., red.; SADOVSKIY, G.L., red.; SUTYRIN, M.A., red.; KHIZHIN, A.V., red. [deceased]; CHEGODAYEV, N.N., red. [deceased]; GORCHAKOV, G.N., tekhn.red.

[Regulations for inland navigation in the U.S.S.R.] Pravila plavaniia po vnutrennim vodnym putiam SSSR. Vvedeny f deistvie prikazom NKRF no.212 ot 28 iiulia 1945 g. Dop. i izmeneniia vvedeny v deistvie prikazom MRF no. 314 ot 14 oktiabria 1947 g. Izd. 8-oe, stereotip. Moskva, Izd-vo "Rechnoi transport," 1958. 197 p. (MIRA 11:5)

1. Russia (1923- U.S.S.R.) Ministerstvo rechnogo flota. (Inland navigation--Laws and regulation)

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SUTYRIN, M.A., inzh.

Pay more attention to the study of specialized pilotage. Rech. transp. 17 no. 6:37-38 Je '58. (MIRA 11:7)
(Pilots and pilotage)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A., inzh.

Piloting ships, barge trains, and rafts through navigable hydraulic structures. Rech.transp. 17 no.9:58-59 S '58. (MIRA 11:11)
(Pilots and pilotage) (Locks (Hydraulic engineering))

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GRIGOR'YEV, Sergey Nikolayevich; KUSKOV, Lev Sergeyevich; SUTYRIN, M.A., inzh., retsenzent; LAPTEV, M.I., red.; FEDYAYEVA, N.A., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[General navigation manual on reservoirs and tailwaters at hydraulic construction projects] Obshchaia lotsiia vodokhranilishch i nizhnikh b'efor gidrouzlov. Moskva, Izd-vo "Rechnoi transport," 1959. 121 p. (MIRA 12:11)
(Inland navigation)

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NIKOLIN, A.V.; BELOV, A.P., kapitan-nastavnik; VARLAMOV, I.S., kapitan-nastavnik; KOSMACHEV, I.K., kapitan-nastavnik; SARATOV, V.F., kapitan-nastavnik; SHMONIN, M.I., kapitan-nastavnik; BEKMAN, A.A., kapitan; DRUZHININ, A.V., kapitan; IVANINA, B.F., kapitan; POLETAYEV, L.A., kapitan; VESHCHILOV, K.A.; VYKHODTSEV, P.K.; SMOLDYREV, A.Ye.; VERESHCHAGIN, Ya.A.; SUTYRIN, M.A.; SAVOSTIN, N.D.; FILYASOV, K.A.; GOLOVUSHKIN, M.P.; IVANOV, A.I.; FILYASOV, K.A., otv.za vypusk; ALEKSEYEV, V.I., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Rules of navigation on R.S.F.S.R. inland waterways] Pravila plavaniia po vnutrennim vodnym putiam RSFSR. Vvedeny v deistvie s 1 marta 1959 g. prikazom ministra rechnogo flota no.28 ot 11 fevralia 1959 g. Moskva, Izd-vo "Rechnoi transport," 1959. 124 p. (MIRA 13:6)

1. Russia (1917- R.S.F.S.R.) Ministerstvo rechnogo flota. 2. Glavnyy revizor po bezopasnosti sudokhodstva (for Nikolin). 3. Nachal'niki basseynovykh sudokhodnykh inspektsiy (for Veshchilov, Vykhodtsev, Smoldyrev). 4. Rabotniki Upravleniya glavnogo revizora po bezopasnosti sudokhodstva (for Vereshchagin, Sutyrin, Savostin, Filyasov). 5. Glavnoye upravleniye vodnykh putey i gidrotekhnicheskikh sooruzheniy (for Golovushkin).
(Inland navigation--Laws and regulations)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, Mikhail Andreyevich; RUL'KOV, D.I., retsenzent; POKROVSKIY, G.A., retsenzent; ALEKSEYEV, V.I., red.izd-va; BOBROVA, V.A., tekhn.red.

[Directives on rules and regulations in navigation on inland waterways of the R.S.F.S.R.] Rukovodstvo po izucheniiu pravil plavaniia po vnutrennim vodnym putiam RSFSR. Moskva, Izd-vo "Rechnoi transport," 1959. 171 p. (MIRA 13:6)
(Inland navigation--Laws and regulations)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SHANCHUROV, Pavel Nikolayevich, dotsent, kand.tekhn.nauk; BUKHANOVSKIY, I.L., starshiy nauchnyy sotrudnik, kapitan dal'nego plavaniya, retsenzent; RODIONOV, V.N., retsenzent; SUKHARIN, V.I., retsenzent; SUTYRIN, M.A., retsenzent; MIRONOV, V.P., starshiy nauchnyy sotrudnik, red.; LOBANOV, Ye.M., red.izdatel'stva; YERMAKOVA, T.T., tekhn.red.

[Ship handling on inland waterways] Sudovozhdenie na vnutrennikh vodnykh putiakh. Moskva, Izd-vo "Rechnoi transport," 1959. 343 p. (MIRA 13:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (for Bukhanovskiy, Mironov). 2. Nachal'nik sudokhodnoy inspektsii Volzhskogo basseyna (for Sukharin). 3. Zamestitel' glavnogo revizora bezopasnosti dvizheniya Ministerstva rechnogo flota (for Sutyrin).
(Ship handling) (Inland navigation)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M.A., inzh.

How to prevent ship collisions. Rech.transp. 18 no.5:52-53 My '59. (MIRA 12:9)
(Inland navigation--Safety measures)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

KIBAL'NIK, Fedor Andreyevich; SUTYRIN, M.A., red.; ALEKSEYEV, V.I., red.izd-va; BOBROVA, V.A., tekhn.red.

[New methods of towing boats] Novyi sposob buksirovki sudov. Moskva, Izd-vo "Rechnoi transport," 1960. 19 p. (MIRA 14:2)

(Towing)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

SUTYRIN, M., inzh.

Strictly obey navigation rules. Rech. transp. 20 no.9:43-44 S '61. (MIRA 14:9)

(Ship handling)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

ALEKSEYEVSKIY, Fedor Grigor'yevich; SUTYRIN, M.A., retsenzent; FILYASOV, K.A., red.; MAKRUSHINA, A.N., red. izd-va; RIDNAYA, I.V., tekhn. red.

[Rigging] Takelazhnye raboty. Izd.6. perer. i dop. Moskva, Izd-vo "Rechnoi transport," 1962. 148 p. (MIRA 15:7)
(Masts and rigging)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9"

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NAZAROV, M.S.; OVSYANNIKOV, N.G.; SOYUZOV, A.A.; MITAISHVILI, A.A.; YUDIN, P.G.; SOLOV'YEV, I.F.; SVIRIDOV, A.A.; RUMYANTSEV, S.M.; KOLICHENKO, K.N.; NIKULIN, M.R.; ORLOV, D.A.; MAYORSKIY, G.I.; SEMENOV, I.Ya.; SUTYRIN, M.A.; KOVALEV, A.I.; VLASOV, A.A.; LEVIN, Ya.L.; KLIMOVITSKIY, A.Z.; METAL'NIKOV, G.F.; PANUSHKIN, G.P.; CHECHETKIN, A.V.; MIKHEYEV, V.D.; KOLOKOL'NIKOV, K.A.; MOISEYEVA, A.I.; TIRON, G.I.; KRYLOVA, V.F.; GOFMAN, Ya.M.; BUDCHANOV, B.F.

K.I. Korshunova; an obituary. Rech. transp. 20 no.12:39 D '61. (MIRA 14:12)

(Korshunova, Kseniia Ivanovna, 1910-1961)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020004-9

POLUEKTOV, Viktor Grigor'yevich; SUTYRIN, M.A., retsenzent; BUROV, N.I., retsenzent; ALEKSEYEV, V.I., red.izd-va; RIDNAYA, I.V., tekhn. red.

[Handling of ships with underwater wings]Upravlenie sudami na podvodnykh kryl'iakh. Redaktor E.I.Chestnov. Moskva, Izd-vo "Rechnoi transport," 1962. 56 p. (MIRA 16:3)
(Hydrofoil boats--Handling)

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