"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

137-58-4-8659

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 334 (USSR)

AUTHOR: Tsyb, P.P.

TITLE: The Potentials of Indium and Thallium on Electrolysis of Their Salts with a Mercury Electrode (O potentsialakh indiya i talliya pri elektrolize rastvorov ikh soley s rtutnym elektrodom)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta tsvetn. met., 1956, Nr 1, pp 181-188

ABSTRACT: Light has been shed on the relationship between cathode and anode potentials (CP, AP) in the electrolysis of the aqueous salts of In and Tl with an Hg cathode relative to the amount of metal in the amalgam at different D and temperatures. It is established that the potentials required for deposition of In and Tl on an Hg cathode are more electropositive than their normal potentials and shift in the direction of the more electronegative values as the concentration of metal in the amalgam increases. As D increases, the CP of In shifts toward the electronegative values and the AP toward the electropositive. Thus, when D=0, the potential for In is ~ -0.35 v, while when D = 3 milliamps/cm^2 it is from -0.76 to -0.80 v (at 18-23°C); any further

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

137-58-4-8659

The Potentials of Indium (cont.)

increase in potential is insignificant. The CP of Tl is virtually independent of D. With rising temperature, the CP of In salt electrolysis shifts toward the more electropositive values, while the AP undergoes virtually no change. In the electrolysis of Tl salts, both the CP and the AP are virtually independent of temperature. Experiments in the electrolytic decomposition of the amalgam show that, under certain conditions, the In and Tl are almost completely extracted from the amalgam by electrolysis.

N.G.

1. Indium--Electrodeposition--Analysis 2. Thallium--Electrodeposition --Analysis 3. Indium salts--Electrolysis 4. Thallium salts--Electrolysis

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Potential of indium during the electrolysis of its sulfuric acid solutions with a mercury electrode. M. G. Savin and P. P. Tsyb (All Union Sci. Research Mining-Met. Inst.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Tsyb, P.P

137-58-5-9318

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 75 (USSR)

AUTHORS: Tsyb, P.P., Batyuk, A.R., Getskin, L.S.

TITLE: On a Treatment of Lead Cakes Accompanied by Extraction of Rare Metals (O metode pererabotki svintsovykh kekov s izvlecheniyem redkikh metallov)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 16, pp 22-24

ABSTRACT: The VNIItsvetmet has performed work on methods of treating Pb-cakes of the Ust'-Kamenogorsk Kombinat by means of granulation with strong H_2SO_4, followed by sulfatization of the grains by the FluoSolids process, as well as by acidic leaching. The composition of the initial cakes (in %) is as follows: humidity 24.9; total Zn content 10.46; total Pb content 33.59; Sb 0.06; Cl_2 0.26; F_2 0.01; Ga 0.001; In 0.0023; Tl 0.007; Ge 0.0026; Cu 1.90; Cd 0.19; Fe 3.62; As 1.17; Se 0.05; and Te 0.025. The cakes were first dried until the moisture content amounted to 4-6% and ground down to a 1-mm particle size. They were then granulated with H_2SO_4, the amount of the latter being equivalent to 110% of the theoretical amount required for the sulfatization of Pb, Zn, Cu, Cd, and Fe. The grains were subjected

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

137-58-5-9318

On a Treatment of Lead Cakes (cont.)

to sulfatization in a FluoSolids furnace for a period of 60 minutes at a temperature of 300°C. Expressed in %, the degree of sulfatization amounted to the following: Pb 99.5; Zn 71.6-83.0; Cd 64.7-67.7; Fe 47.3; Cu 100. In the course of the sulfatization process the following elements were sublimated: 15% of Ge, 20% of As, and 25% of Se. After sulfatization the granules were leached with water. The solid-liquid ratio in the leaching process is equal to 1:3. After leaching, the solutions contain 2.8-3 g/ℓ As, 0.1-0.15 g/ℓ Sb, and and 20 g/ℓ Fe, the degree of extraction of As. Sb, and Fe being, respectively, 85-90%, ~50%, and 30%.

G.S.

1. Lead ores--Processing 2. Rare earth elements--Separation 3. Sulfuric acid --Applications

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

GETSKIN, L.S.; BATYUK, A.G.; TSYB, P.P.

Granulation of dustlike materials with use of a strong solution of sulfuric acid. Tsvet. met. 30 no.7:23-25 Jl '57. (MLRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov.
(Nonferrous metals) (Sulfuric acid)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, A., NAMETKIN, S., MAKOVER, S., AND SANIN, P.

Katalitcheskoye Obesserivaniye Kashpirskogo Benzina V Atmosfere Vodoroda, Goryuchiye Slantsy, 1933, No. 1, 32.

SO: Goryuchiye Slantsy #1934-35, TN .871
G .74

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

PERMINOV, A.Ye.; ROMANOV, A.A.; MIZEROV, A.V.; TSYBA, M.M.; ZHELUDKOV, A.S.; NEKRASOV, V.V.; PRASOLOV, M.I.; BARTENEV, S.N.; BELYAYEVA, T.P.; ZHERDEV, P.A.; KOYVUNEN. T.M.; SMORODOV, P.V., redaktor; POD"YEL'SKAYA, K.M., tekhn. red.

[Manual for a Karelian field crop grower] Spravochnik karel'skogo polevoda. Petrozavodsk, Karel'skoe knizhnoe izd-vo, 1962. 435 p. (MIRA 17:3)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA A., MAKOVERS., SANIN P., NAMETKIN S.

Obesserivaniye Slantsevykh Benzinov Gidrirovaniyem Pod Davleniyem V Prisutstvii Katalizatorov, Goryuchiye Slantsy, 1934, No 1, 44

SO:

Goryuchiye Slantsy # 1934-35, TN .871
G .74

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, A., SANIN, P., AND NAMETKIN, S.

Obesserivaniye Slantsevykh Benzinov Katalliticheskim Gidrirovaniyem Pri Atmosfernom Davlenii, Goryuchiye Slantsy, 1934, No. 2, 40.

SO: Goryuchiye Slantsy #1934-35, TN .871
G .74

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, A.N.; SHEYNMAN, A.B.

Chemical composition of the aromatic part of gasolines obtained by oxidation cracking and reforming. Trudy Inst.neft no.6:12-19 '55. (Gasoline) (MLRA 8:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, A. N. and SHEYNMAN, A. D.

"Chemical Composition of Aromatics Contained in Gasoline Produced by Oxidative Cracking and Reforming," Trudy Inst. Nefti, No.6, 1955

Translation D 411562

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA,A8N8

600

1. SOLODOV, S. M., TSYBA, A.N.

2. USSR (600)

"Regeneration of the Zinc Chloride Carrier During the Refining of Benzene Produced by Cracking at Dubrovaya", Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 5, 1941. Institute of Mineral Fuels, Academy of Sciences, USSR. Submitted 18 Jan 1941.

9. [redacted] Report U-1530, 25 Oct 1951.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SHEYNMAN, A. B., and TSYDA, AN.

Laboratory of Vapor-Phase Oxidation Cracking, Institute of Mineral Fuels, Academy of Sciences USSR (-1944-)

"Vapor-Phase Oxidation Cracking of Gas Oil and Ligroin in the Presence of Oxygen Engriched Air"-Report 1. Iz. Ak. Nauk. SSSR. Otdel, Tekh. Nauk. Nos. 10-11, 1944

BR-52059019

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KOROBOV, V., nachal'nik uchastka; TSYBA, F., nachal'nik uchastka; BOL'SHAKOV, V.

Utilizing unexploited possibilities for profitable mining. (MLRA 7:1)
Mast.ugl. 3 no.1:19 Ja '54.

1. Machinist kombayna shakhty No.19-20 kombinata Stalinugol'(for Bol'shakov) (Coal mines and mining)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, Fedor Matveyevich; SAKHAROV, A.P., otv. red.; SMIRENSKIY, M.M., red. izd-va; OVSEYENKO, V.G., tekhn. red.

[Working contiguous seams] Razrabotka sblizhennykh plastov. Moskva, Gosgortekhizdat, 1962. 45 p. (MIRA 15:5)
(Donets Basin--Coal mines and mining)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYRA, F.M. (g.Shakhty)

Improved double drift mining system. Ugol' 35 no.3: 30-31 Mr '60. (MIRA 13:6)
(Donets Basin--Mining engineering)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KONKIN, Vasiliy Dmitriyevich; ZHIKHAREVA, Valentina Iosifovna; TSYBA, L.A., red.; GUSAROV, K.F., tekhn. red.

[Complexometric analysis] Kompleksometricheskii analiz. Kiev, Gostekhizdat, USSR, 1962. 147 p. (MIRA 15:6)
(Chemistry, Analytical) (Complexons)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

IVANCHENKO, Anatoliy Ivanovich; TSYBA, L.A., red.; STARODUB, T.A., tekhn. red.

[Design of single-worm presses]Raschet odnocherviachnykh pressov. Kiev, Gostekhizdat USSR, 1962. 94 p. (MIRA 16:2)
(Hydraulic presses)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SHCHERBAKOV, Anatoliy Aleksandrovich; TSYBA, L.A., red.; STARODUB, T.A., tekhn. red.

[Furfurole]Furfurol. Kiev, Gostekhizdat USSR, 1962. 240 p. (MIRA 16:2)

(Furaldehyde)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KONKIN, Vasiliy Dmitriyevich; ZHIKHAREVA, Valentina Iosifovna; TSYBA, L.A., red.; GUSAROV, K.F., tekhn. red.

[Complexometric analysis] Kompleksometricheskii analiz. Kiev, Gostekhizdat USSR, 1962. 147 p. (MIRA 15:7)
(Chemistry, Analytical) (Complexons)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

PRUDNIKOV, Petr Gerasimovich; TSYBA, L.A., red.; GUSAROV, K.F., tekhn. red.

[New technology and equipment in furniture manufacture] Novaia tekhnika v proizvodstve mebeli. Izd.2., perer. i dop. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1961. 263 p. (MIRA 14:11)
(Furniture)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

OMEL'CHENKO, Svetlana Ivanovna; TSYBA, L.A., red.; BEREZOVYY, V.N., tekhn. red.

[Epoxide resins]Epoksidnye smoly. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1962. 102 p. (MIRA 15:8)
(Epoxy resins)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

BIBIKOV, I.; DEREVYANKO, K.; KAZACHKO, V.; KIRICHENKO, I.; KUCHER, N.; MACHUKHO, A.; NABATNIKOV, P.; SOKOLOV, D.; SIVOKON'Ya; US, V.; SHCHIGALEV, V.; BURAVENKO, N.; KOVSHAROV, S.; SOKOLOV, S.; ZAGORUL'KO, E.; TSYBA, M.; FOMENKO, I.; LYAKHOVETSKIY, M.

Let us help farmers grow an abundant crop. Grazhd. av. no.3:3 Mr '61. (MIRA 14:3)

(Aeronautics in agriculture)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

DANILEVICH, V.M.; TSYBA, M.M.

Effect of different fertilizers on the microflora of newly reclaimed Peat soil of the transitional type in bogs of the Karelian S.S.R. Izv.Kar. i Kol'.fil. AN SSSR no.2:93-99 '59. (MIRA 12:11)

1. Institut lesa Karel'skogo filiala AN SSSR.
(Karelia--Peat soils) (Soil microorganisms)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KOROVIN, A.I.; IL'INA, I.V.; TSYBA, M.M.

Growth of roots in depth and intensity of tillering in plants of the north. Trudy Kar. fil. AN SSSR no.28:108-112 '60. (MIRA 14:9)

(Karelia--Growth (Plants))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, N.N.

Effect of the "northern rate" and organic and mineral fertilizers on winter rye yields. Trudy Kar. fil. AN SSSR no.28:113-125 '60. (MIRA 14:9)

(Rye--Fertilizers and manures)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, M.M.

Effect of cultivation practices on speeding up of meadow formation on drained transitional bogs in Karelia. Trudy Kar. fil. AN SSSR no.29:69-87 '61. (MIRA 15:2)

(Karelia--Pastures and meadows)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, M.M.

Depth of the root systems of cultivated plants in the peat soils of southern Karelia. Uch. zap. Petrozav. gos. un. 12 no.2:143-149 (MIRA 16:

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, N.

Friends from China on a visit to Ukraine. Prom. koop. 12 no.8:37 Ag '58. (MIRA 11:9)

1.Zamestitel' predsedatelya pravleniya Ukrpromsoveta.
(Ukraine--Relations (General) with China)
(China--Relations (General) with the Ukraine)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, N.P.; BEYSOVA, M.P.; KRYUKOV, P.A.

Trilon B in determination of Hardness. Gidrokhim.mat. 24:44-48 '55. (MIRA 9:4)

1.Gidrokhimicheskiy institut Akademii nauk SSSR, g.Novocherkassk.
(Water, Underground) (Water--Analysis)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KRYUKOV, P.A.; TSYBA, N.P.

Comparing the composition of solutions impregnating rocks and waters from boreholes in the construction zone of the Stalingrad Hydroelectric Power Station. Gidrokhim.mat. 28:136-150 '59. (MIRA 12:9)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, g.Novocherkassk. (Stalingrad Reservoir region--Water, Underground)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, N.P.; KRYUKOV, P.A.

Comparison of the methods for investigating rock solutions.
Gidrokhim.mat. 29:273-281 '59. (MIRA 13:5)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, Novocherkassk.
(Rocks--Analysis)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

KRYUKOV, P.A.; SOLOMIN, G.A.; GOREMYKIN, V.E.; TSYBA, N.P.; MANIKHIN, V.I.; LEBEDEVA, Ye.M.

Oxidation-reduction state of waters and rocks in the region of the construction site of Stalingrad Hydroelectric Power Station. Gidrokhim. mat.31:142-163 '61. (MIRA 14:3)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, g. Novocherkassk.
(Stalingrad Hydroelectric Power Station region--Water,Underground)
(Oxidation-reduction reaction) (Geochemistry)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBA, S.A.

Miniature well conductometer. Sbor.luch.rats.predl. pt. 2: 56-57 '63. (MIRA 17:5)

1. Dnepropetrovskaya geofizicheskaya ekspeditsiya.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKIN, N.I., inzh.

Consideration of the amortization in economic and engineering calculations in power engineering. Teploenergetika 8 no.7:44-48 Jl '61. (MIRA 14:9)

1. Chelyabinskiy politekhnicheskiy institut.
(Electric power) (Amortization)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKIN, N.I., inzh.

An erroneous recommendation of methods to be used in engineering and efficiency calculation in power engineering. Izv.vys.ucheb.zav.; energ. 4 no.5:122-126 My '61. (MIRA 14:6)

1. Chelyabinskiy politekhnicheskiy institut. Predstavlena kafedroy ekonomiki promyshlennosti i organizatsii proizvodstva.
(Electric power)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

TSYBAKIN, Ya. [Fr.]

ca

4

Electrical resistance of the charge used in making ferrosilicon. S. Khitrik and Ya. Tsybakin. *Teoriya i Prakt. Met.* 10, No. 3, 23 9(1938); *Met. Abstracts* (in *Metals & Alloys*) 9, 480(1938). The elec. resistances of coke and mixts. of (1) coke and quartz, (2) of coke, quartz and steel chips and (3) of coke, quartz and Fe ore were detd. at temps. up to 950°. The resistance of coke drops about 50–60% on heating between 600° and 850° and then remains practically stationary. With the same coke size, increasing quartz lumps from 10 to 50 mm. reduced the resistance of the charge from 140 to 42 ohms. Elec. resistance of a mixt. is a straight-line function of the coke-quartz diameter ratio. Deviations from this rule observed in plant operation can be attributed to stratification of the charge.

M. W. B.

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

OPEN

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKIN, Ya. F.

CA

9

Increasing the yield of chromium from chromium ore in the smelting of ferrochromium low in carbon. S. I. Khitrik and Ya. F. Tsybakin. *Teoriya Prakt. Met.* 11, No. 4-5, 31-7(1939); cf. following abstr.—The content of Cr_2O_3 in the slag depends on its basicity. The greater the ratio $CaO:SiO_2$ the less Cr_2O_3 is in the slag. An increase of $CaO:SiO_2$ to 1.5 decreases the content of Cr_2O_3 to 2-4% and increases the amt. of slag by 2.5%. The coeff. of Cr yield in such cases is 65-6% (at Cr_2O_3 4% in the slag). A further increase of the basicity of slag is not recommended, because slag with $CaO:SiO_2 = 1.5$ is brittle. At $CaO:SiO_2 = 1.75$ the elec. cond. of the slag increases to twice its ordinary value, which leads to an increased C content caused by the voltaic arc. Up to $CaO:SiO_2 = 1.5$ no difficulties during smelting are encountered because the m. p. of such a slag is below 1700°. Overheating the bath increases the Cr_2O_3 content in the slag. There is a definite relation between ΣCr_2O_3 and ΣFe which is expressed by the cubic parabola $\Sigma Cr_2O_3 = K(\Sigma FeO)^3$. The coeff. K depends on the compn. of ferrochrome and is 0.25 for ferrochrome contg. Cr 56%. Owing to the relation existing in the slag between ΣCr_2O_3 and ΣFeO no Fe ore should be added to the furnace before emptying because the O of the ore oxidizes not only Si, but also Cr. The use of limestone alone is not recommended, because a large amt. of heat is necessary for its combustion in the open furnace (approx. 1250 kw.-hrs./ton of limestone) and the CO_2 formed oxidizes Si and Cr. This reduces the coeff. of the utilization of Si and increases the Cr_2O_3 content in the slag. The use of small amts. of limestone in the charge (25-30%) is recommended because this agitates the bath, causing a better mixing of the slag and accelerating the reduction of Cr from the ore. The limestone must be in the form of well-burned pieces. A fresh layer of ore must be created for increasing Cr. Some limestone should be added if foam is formed after the addn. of a small amt. of ore under the electrodes.

W. R. Henn

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

CA

TSYBAKIN, Ya. F.

4

PROCESSES AND PROPERTIES INDEX

Distribution of the current in three-phase iron-smelting furnaces. Ya. F. Tsybakin. *Teoriya Prakt. Met.* 11, No. 7, 18-24(1939).—The problem of the distribution of the current in a 3-phase furnace is confined to the detn. of the elec. field between the electrodes and the furnace floor. In order to verify the theoretical calcns. of the elec. fields, models were prepd. which consisted of horizontal and vertical cross-sections of 3-phase furnaces. The model was filled with 1 mm. coke (a uniform conducting medium). The exptly. obtained fields coincided nearly completely with those obtained by theoretical calcns. A comparison of results obtained from furnaces in which the 3 electrodes were placed at the points of a triangle and those in which the electrodes were placed in a row showed that the former method has a no. of advantages over the 2nd method: An even charge in all phases, the current flowing from the electrode to the furnace floor is greater, the smelting zones are concd. at the center, the smelting zones can be combined into one large reaction zone, heat losses are smaller and the movement of the charge is more uniform along the horizontal cross-section of the furnace. In both types a deep placing of the electrodes produces better results. It increases the useful current and decreases the heat losses. If the heat losses are not essential the deep setting of the electrodes permits of a shorter shaft. This decreases the current which shunts the useful current in the triangle arrangement of electrodes.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.

PHASE I BOOK EXPLOITATION 1127

p. 2

Moscow. Fiziko-tekhnicheskiy institut

Issledovaniya po fizike i radiotekhnike (Research in Physics and Radio Engineering) Moscow, Oborongiz, 1958. 132 p. (Series: Its Trudy, vyp. 2) 3,700 copies printed.

Ed.: Zaytseva, K.Ya., Engineer; Ed. of Publishing House: Gortsuyeva, N.A.; Tech. Ed.: Rozhin, V.P.; Managing Ed.: Zaymovskaya, A.S., Engineer.

PURPOSE: The book may be useful to scientific personnel, engineers, and students conducting research in physics and radio engineering.

COVERAGE: The book is a collection of 13 articles written by instructors and graduate and undergraduate students of the Moscow Institute of Physics and Technology. The articles discuss problems in radio physics, optics and physics. No personalities are mentioned. References appear at the end of each article.

TABLE OF CONTENTS:

Kozel, S.M., Candidate of Physical and Mathematical Sciences. Modulation Optical Interferometer for Measuring the Angle of a Light Beam 3

Card 1/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Tsybakov, B.S., Yakovlev, V.P. Nature of Functions Expressing Limited Spectrum, and Related Problems of Communication Theory 13

Zhivlyuk, Yu.N. Some Properties and Applications of a Plane-Conical "Axikon" 30

Kolachevskiy, N.N. Preliminary Results of Studying the Temperature Relationship of Noises of Periodic Magnetic Polarity Reversal in Ferromagnetics 41

Sukharev, Ye.M., Repin, V.G. Linear-filter Correlator 47

Leshchanskiy, Yu.I., Candidate of Technical Sciences. Application of the Method of Least Squares for Solving a Problem of Waves Passing Throught the Diaphragm in a Regular Waveguide 58

Gladun, A.D. Distribution of Potentials in the Region of Space-charge-limited Currents in an Ideal Planar Triode With Minimum Potential Between the Cathode and Grid 69

Strunin, V.P. Diffusion of Hydrogen Throught Palladium and Determining the Dissociation Rate for Hydrogen on the Surface of Palladium 76

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Voytsekhovskiy, B.V., Candidate of Technical Sciences. Investigating the Nature of the Wave Front of Spin Detonation 81

Belokon', V.A. Properties of Uniform Shock Waves in Luminous Gas at $M \to \infty$ 92

Nikitin, L.V. Elastic-Ductile-Plastic Shear Waves in a Circular Rod 108

Kukudzhanov, V.N. Perpendicular Impact on a Plate by a Rotating Cylinder 115

Bakut, P.A. Determining the Upper Limits of the Degree of Stability in Single-loop Systems With Derivative Action 123

AVAILABLE: Library of Congress

JP/sfm
1-23-59

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

06470
SOV/141-1-5-6-14/28

AUTHORS: Tsypakov, B.S. and Yakovlev, V.P.

TITLE: Reproduction of the Input Signal from the Response of a Device

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1958, Vol 1, Nr 5-6, pp 98 - 104 (USSR)

ABSTRACT: The devices considered are characterised by:

$$F(y) = \int_{-\infty}^{+\infty} f(x)h(y - x)dx \qquad (1)$$

where $F(y)$ is the response of the device to an input signal $f(x)$, while $h(y)$ is a characteristic function in the device. It is necessary to determine the requirements to be met by functions $F(y)$, $f(x)$ and $h(y)$, such that the solution of Eq (1) would be unique. If the device is an infinite passband, the conditions of uniqueness can easily be established; they follow directly from the theory of the Fourier integral (Ref 13). However, when the bandwidth of the device is finite, it is necessary to assume not only the finiteness of the input

Card1/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

06470
SOV/141-1-5-6-14/28

Reproduction of the Input Signal from the Response of a Device

signal but also its finite duration. The first assumption shows that the unique solution is in the form of Eq (4), where $h(\omega)$ is defined by Eq (2); the integration of Eq (4) is done over the intervals where $h(\omega) \neq 0$. If the second assumption is also taken into account, the unique solution of Eq (1) is given by:

$$f(x) = \frac{1}{2\pi} \int_{-\infty}^{+\infty} \left\{ \sum_{n=0}^{\infty} \left[\frac{\hat{F}(\omega)}{\hat{h}(\omega)} \right]^{(n)}_{\omega=\omega_0} \frac{(\omega - \omega_0)^n}{n!} e^{i\omega x} d\omega \right. \qquad (9)$$

Normally, the reproduction of the input signal of the device, on the basis of its output signal (by means of Eqs 4 or 9) is effected approximately. It is, therefore, of interest to determine the errors of the reproduction. It is shown that the error in the determination of the response of the device is dependent on the resolving power

Card2/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

06470

SOV/141-1-5-6-14/28

Reproduction of the Input Signal from the Response of a Device

η of the measuring equipment. The author expresses his gratitude to Ya.I. Khurgin for valuable advice and discussion. There 15 references, of which 7 are English, 6 Soviet and 2 German; 1 of the Soviet references is translated from English.

ASSOCIATION: Moskovskiy fiziko-tekhnicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: June 3, 1958

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B. S.

В. С. Кибаков

О пропускной способности многолучевых каналов связи.

Ю. М. Мартынов

К теории корректирующих кодов

10 июня

(с 10 до 16 часов)

А. Е. Башаринов,
Б. С. Флейшман,
Г. С. Тысленский

Метод последовательного анализа в задачах обнаружения сигнала в многоканальных системах.

Н. Л. Тепляк

Элементы теории максимальной помехоустойчивости систем с дискретными сигналами.

В. И. Митяшев

О помехоустойчивости одного способа определения временного положения импульсов

Г. А. Сергеев

К вопросу об оптимальной обработке экспериментальных данных

4

10 июня

(с 18 до 22 часов)

Ю. С. Лизин

О пороговых сигналах при некогерентном накоплении с экспоненциальной весовой функцией

В. Е. Муравьев

Новые принципы анализа спектров

Г. А. Медведев

Помехоустойчивость приемника с конечным временем восстановления. Случай простейшего потока мешающих сигналов

И. И. Цукерман

О помехоустойчивости координатно-водового метода передачи телевизионных сообщений.

11 июня

(с 10 до 16 часов)

А. Е. Башаринов

Нарастающая вероятность обнаружения импульсного пакета переменной длительности

Л. И. Филиппов

Идеальное радиоприемное устройство неортогональных сигналов.

5

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORiE), Moscow, 8-12 June. 1959

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Tsybakov, B.S.

PHASE I BOOK EXPLOITATION SOV/3827

Moscow. Fiziko-tekhnicheskiy institut

Issledovaniya po fizike i radiotekhnike (Research in Physics and Radio Engineering) Moscow, Oborongiz, 1959. 170 p. (Series: Its: Trudy, vyp. 4) Errata slip inserted. 2,150 copies printed.

Sponsoring Agency: SSSR. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed.: K.Ya. Kaytsova, Engineer; Ed. of Publishing House: S.D. Antonova; Tech. Ed.: L.A. Garmukhina; Managing Ed.: A.S. Zemovskaya, Engineer.

PURPOSE: This book is intended for scientific workers, students in advanced courses and engineers.

COVERAGE: This is a collection of 15 studies dealing with problems of radio physics, electronics, quantum physics, and aerodynamics. The studies examine the method of least squares as applied to the propagation of radio waves in the presence of a plane junction, the general conditions of stability of a random process at the output of a linear filter while a periodic unstable random process is supplied at the input of the filter, the results of experiments with a ferromagnetic specimen with large Barkhausen jumps as an explanation of the noise mechanism in ferromagnets at cyclic magnetization reversal, experiments for the determination of thermal characteristics and the results of an experimental study of a turbulent boundary layer in a supersonic flow. No personalities are mentioned. References accompany most articles.

TABLE OF CONTENTS:

Tsybakov, B.S., and V.P. Yakovlev. Similarity Between an Object and Its Optical Image 25
Conditions at which the image of an object produced by an optic system will resemble the structure of the object are determined. It is shown that for objects of finite range a similar image is impossible. The results obtained in this study define more accurately the conditions of L.I. Mandel'shtam.

Tolstov, Yu.G. [Doctor of Technical Sciences, Professor]. Germanium Power Rectifiers 29
Problems of manufacture and application of germanium power rectifiers are clarified. Methods of determining the operational parameters of germanium power rectifiers as well as control methods using saturable reactors for these rectifiers are studied.

Tolstov, Yu.G. [Doctor of Technical Sciences], G.K. Kartashov, [Candidate of Technical Sciences], and V.V. Pyrkov [Candidate of Technical Sciences]. Model of Electrotransmission of Direct Current 49
This model was designed at the Moscow Institute of Physics and Technology. The power and control systems of the model are briefly described.

Bondarenko, B.V. Temperature Dependence of the Work Function of Thermionic Cathodes 62
Reasons for the temperature dependence of the work function of various thermionic cathodes are investigated. The spot effect of the emitting surfaces of cathodes on the temperature coefficient values of the work function is shown. In the case of semiconductor cathodes the experimentally obtained values of temperature dependence $\Delta\Phi_T / \Delta T$ can be explained by the temperature variation of the electrochemical potential.

Bondarenko, B.V. Methods of Determining Thermionic Emission Constants of Semiconductor Cathodes 72
A combined method of measuring the thermionic emission constants Φ and A of semiconductor cathodes is described. This method permits measuring the work function (average for the flow and average for the surface) for the same cathode specimen, as well as determination of the temperature coefficients of the work functions, which facilitates interpretation of experimental results. Preliminary data on the energy levels of semiconductor cathodes can be obtained by making measurements over a wide temperature range.

Kiselev, A.R. Problem of Emission Decline (Fatigue) in an Oxide-Coated Cathode 85
Experimental results showing an increase in the work function and in the constant A of the oxide-coated cathode during a pulse are presented. The observed change in the work function is considered a verification of the mobile-donor hypothesis. The author thanks [illegible]

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.

Carrying capacity of a single-beam channel with random variations in adsorption. Nauch. dokl. vys. shkoly; radiotekh. i elektron. no.2:44-51 '59. (MIRA 14:5)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Information theory)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.; YAKOVLEV, V.P.

Likeness of an object to its optical image. Trudy MFTI no.4: 25-28 '59. (MIRA 13:9)

(Optics)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SOV/109- --4-3-31/38

AUTHORS: Tsybakov, B.S., and Yakovlev, V.P.

TITLE: Accuracy of the Reproduction of a Function by Means of a Finite Number of Terms of the Kotel'nikov Series (O tochnosti vosstanovleniya funktsii s pomoshch'yu konechnogo chisla chlenov ryada Kotel'nikova)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 3, p 542 (USSR)

ABSTRACT: It is known that a function f(t) can be expressed in terms of the series represented by the first equation on page 542. If a finite number of terms is taken in this series, the signal is not reproduced accurately, and it is shown that the error can be expressed by the second formula on page 542. The parameter P in this formula represents the energy carried by function f(t), while T is half the duration time of the function. There are 1 figure and 2 Soviet references.

Card 1/1

SUBMITTED: October 1, 1958

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SOV/109- - -4-3-32/38

AUTHORS: Tsybakov, B.S., and Yakovlev, V.P.

TITLE: Width of the Spectral Lines of a Multi-Vibrator (Shirina spektral'nykh liniy mul'tivibratora)

PERIODICAL: Radiotekhnika i Elektronika, Vol 4, Nr 3, 1959, pp 543-545 (USSR)

ABSTRACT: It is known that due to the presence of unstable and noisy elements, the spectral lines of an oscillatory system are widened instead of being infinitely narrow. This effect is also encountered in free-running multi-vibrators. The effect is investigated in this paper. A simple anode-coupled multivibrator shown in Fig 1 is considered. The anode waveforms generated by the system are shown in Fig 2. It is shown that, when the system contains noisy elements, the constant t_1 (see Fig 2) is determined by the root of Eq (2), where $f(t)$ is the exponential portion of the waveform shown by the solid line in Fig 2, u is the cut-off potential of the tube and $\xi(t)$ is the noise acting on the grid of the second tube (Ref 6). The mean square value of the noise is given by Eq (3), where I represents the average current of the second tube, μ is the amplification factor of the tube and C_0 is its parasitic capacitance. Since the quantity σ^2 of Eq (3)

Card 1/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SOV/109- - -4-3-32/38

Width of the Spectral Lines of a Multi-Vibrator

is comparatively small, Eq (2) can be expanded into the Taylor series as shown in Eq (4). This can approximately be written as Eq (9). From this it follows that the quantity τ_1 (see Fig 2) is distributed according to the normal law as given by Eq (10). The distance between the neighbouring pulses τ, is therefore distributed in accordance with Eq (12). The spectral density of the process at the output to the multivibrator can be found by employing Eqs (10) and (12), and is in the form of Eq (13) (see Ref 5). From Eq (13) it is found that the width of a spectral line at a level 0.7 is given by Eq (15), where n denotes the number of a harmonic and ν is the frequency of the fundamental. The relative width of a line is expressed by Eq (16), where t_0 represents the average value of τ_1 (see Fig 2). The authors express their gratitude to Ya.I. Khurgin for suggesting

Card 2/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SOV/109- -4-3-32/38

Width of the Spectral Lines of a Multi-Vibrator

the problem and for his interest in this work.
There are 2 figures and 6 references, 5 of which are
Card 3/3 Soviet and 1 English.

SUBMITTED: October 17, 1958

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SOV/109-4-7-5/25

AUTHOR: Tsybakov, B.S.

TITLE: Capacity of Two-path Communication Channels

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 7, pp 1116 - 1123 (USSR)

ABSTRACT: Communication at medium and short waves is hampered by the phenomenon of fading of the received signal. This is due to the well-known effect of the interference of several rays proceeding from various paths. The effect leads to decrease in the channel capacity of such a communication system. This was first considered by V.I. Siforov (Ref 1). A more detailed investigation of the problem is undertaken in this article. It is assumed that the communication transmitter radiates a signal $\xi(t)$ having an average power P_c. The signal has a bandwidth extending from 0 to W. The signal appearing at the receiver can be represented by Eq (1) where the functions a_1, a_2, τ_1 and τ_2 are random functions independent of ξ and ζ; ζ represents

Card1/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

the perturbing noise which is independent of the signal ξ ; A is the linear operator which describes the filtering characteristics of the system. Since the fading phenomenon occupies a very narrow bandwidth (of the order of 1 c.p.s.), Eq (1) can be simplified and written as:

$$\eta(t) = a_1\xi(t - \tau_1) + a_2\xi(t - \tau_2) + \zeta(t) \qquad (3)$$

where a_1 and a_2 represent fixed quantities which are equal to the square roots of the mean square values of the processes $a_1(t)$ and $a_2(t)$; the quantities τ_1 and τ_2 are random quantities whose distribution coincides with uni-dimensional distributions of the processes $\tau_1(t)$ and $\tau_2(t)$. The channel capacity of the system can be evaluated by employing the formula of M.S. Pinsker (Ref 4). This is given by:

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

$$C' = \max_{\{f_\xi(\omega) \geqslant 0\}} \frac{1}{2\pi} \int_{\omega_0}^{\omega_0+W} d\omega \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} p(\tau_1, \tau_2) \log \left[1 + \frac{h(\omega, \tau_1, \tau_2) f_\xi(\omega)}{f_\zeta(\omega)} \right] d\tau_1 d\tau_2 \qquad (7)$$

where the function $h(\omega, \tau_1, \tau_2)$ is the spectral characteristic of a linear operator H, which determines the transformation represented by Eq (8). The function $f_\xi(\omega)$ is the spectral density of the transmitted signal, $f_\zeta(\omega)$ is the spectral density of the noise, $p(\tau_1, \tau_2)$ is the simultaneous density distribution of the quantities τ_1 and τ_2. The capacity C' can also be represented by Eq (14), where the function Φ is defined by Eq (13). The solution of Eq (14) can be found by using the Lagrange method. This permits the determination of the spectral density of the signal and leads to Eq (16). The solution

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

of Eq (16) is in the form of Eq (17). When the spectral density of the noise is uniform (Eq 18) and when the signal spectrum is homogeneous (Eq 19), the capacity is given by:

$$C' = F \log_2 \left[1 + \frac{(a_1^2 + a_2^2) P_c}{P_\omega} + \sqrt{1 + \frac{(a_1^2 - a_2^2)^2 P_c^2}{P_\omega^2} + 2 \frac{(a_1^2 + a_2^2) P_c}{P_\omega}} \right] \quad (20)$$

where $F = W/2\pi$. When the signal-to-noise ratio is small, Eq (20) can be approximately written as Eq (21). On the other hand, when the signal-to-noise ratio is large, the capacity is expressed by Eqs (22). In the absence of one of the rays, (e.g. $a_2 = 0$), the capacity is expressed by Eq (24). The capacity of a two-path system is compared with that of a single-path system in Figure 1 and 2. It is found that the decrease in the capacity caused by the

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

Capacity of Two-path Communication Channels SOV/109-4-7-5/25

two-path propagation does not exceed 15%. The author expresses his gratitude to V.I. Siforov for his interest in this work and to R.L. Dobrushin for his advice. There are 2 figures and 5 Soviet references.

SUBMITTED: March 9, 1959

Card 5/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B. S., Cand Phys-Math Sci -- (diss) "Transmission capacity of multiray communication channels." Moscow, 1960. 10 pp; (Moscow Physics-Technology Inst); 200 copies; price not given; (KL, 22-60, 131)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

S/194/61/000/010/064/082
D271/D301

69500

AUTHORS: Dobrushin, R.L., Khurgin, Ya.I. and Tsybakov, B.S.

TITLE: Approximate computation of the transmission capability of radio channels with random parameters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 13, abstract 10 I87 (Tr. Vses. soveshchaniya po teorii veroyatnostey i matem. statistike 1958, Erevan, AN ArmSSR, 1960, 164-171)

TEXT: The velocity of information transmission and the transmission capability of a telecommunication channel are considered in conditions of multi-path propagation. It is assumed that channel parameters change very slowly by comparison with the pass band of the channel. In this case channel parameters are regarded as random values remaining constant during time intervals sufficiently long to obtain near optimal coding. 10 references. [Abstracter's note: Complete translation] V/B

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

22901

S/109/61/006/004/016/025
E140/E163

6.9500

AUTHOR: Tsybakov, B.S.

TITLE: Shannon's scheme for Gaussian messages with uniform spectrum in a channel with fluctuation noise

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.4, 1961, pp. 649-651

TEXT: The author of this note discusses a simple proof for Shannon's direct theorem for the particular case of "white" Gaussian communication and channel. It is demonstrated that linear coding and decoding methods are optimal for this case. The proof uses the well known and well developed apparatus of the theory of the optimal linear filter.
There are 4 references: 2 Soviet and 2 English.

SUBMITTED: November 26, 1960

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

(7)

[illegible], A. E., Moscow Institute of Radio Engineering and Electronics - "On designs for automatic recognition of patterns in noise" (Section III)
BRAYNES, S. N., and SVECHINSKIY, V. B., Biocybernetical Institute, University of Moscow - "Matrix structure in stimulating of learning" (Section VII)
DOBRUSHIN, R. L., and TSYBAKOV, B. S., Moscow Institute of Radio Engineering and Electronics - "Information transmission with additional noise" (Section XI)
FLEYSHMAN, B. S., Moscow Institute of Radio Engineering and Electronics - "Basic theorems of the constructive information theory" (Section VIII)
NAPALKOV, A. V., Chair of Higher Nervous Activity, Moscow State University -"Mechanisms of the selection of useful and trustful information" (Section IX)

REPORT to be submitted for the International Symposium on Information Theory, Brussels, Belgium, 3-7 Sep 1962

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

34026

S/109/62/007/001/003/027
D201/D301

6.9500

AUTHOR: Tsybakov, B.S.

TITLE: Linear coding of information

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 1, 1962, 25-38

TEXT: In the present article the author considers a method of optimum linear coding and decoding of information. Application of this method requires the knowledge of spectral density of transmitted information only, together with the spectral relationships inside the channel. The coding and decoding is assumed to be obtained by linear filters with constant parameters, the circuit being that usually assumed in the theory of information, whose bloc diagram may be represented by a series connection of blocks of coding arrangement, communication channel and decoder. The measure of the quality of transmission through such a channel, whose input signal $\eta(n)$ is a random stationary seqeunce, is the r.m.s. deviation of the received information from $\tilde{\xi}(n)$, the transmitted one $\xi(n)$, according to

Card 1/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

34026

S/109/62/007/001/003/027
D201/D301

Linear coding of information

$$\varkappa^2 = M[\xi(n) - \tilde{\xi}(n)]^2 \qquad (5)$$

and the problem reduces thus to minimizing $\varkappa^2$ by proper choice of coding and decoding filters. When the value of $\varkappa^2$ becomes of a certain fixed magnitude this minimum r.m.s. value of error is evaluated for the important case of a channel with additive noise, i.e. when the signal is transmitted through the channel

$$\tilde{\eta}(n) = \eta(n) + \theta(n), \qquad (27)$$

in which the additive noise $\theta(n)$ is a random stationary sequence independent of the signal $\eta(n)$. It is shown that for such a channel the optimizing coding filter transmits only frequencies λ, at which the ratio of the spectral density of information at the input is greater than a certain threshold value and that the optimum decoding filter will not transmit frequencies cut-off by the coding filter and the minimum value of $\varkappa^2$ is then derived as

$$\varkappa^2 = \frac{1}{2\pi}\sqrt{\mu_1}\int_V \sqrt{f_{\xi\xi}(\lambda) f_{\theta\theta}(\lambda)}\,d\lambda + \frac{1}{2\pi}\int_{\bar{V}} f_{\xi\xi}(\lambda)\,d\lambda, \qquad (36)$$

Card 2/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

34026

S/109/62/007/001/003/027
D201/D301

Linear coding of information

in which the domain $\overline{V}$ consists of λ for which $f_{\xi\xi}(\lambda)/\mu_1 f_{\theta\theta}(\lambda) < 1$, $f_{\xi\xi}$ and $f_{\theta\theta}$ are the mutual spectral densities of the information and noise and μ_1 is a factor. The second term in Eq. (36) represents the contribution to the error as introduced by the coding filter. The above results may be easily applied to the case of transmission of continuous random functions. The distribution densities and the dependence of $\varkappa^2$ on the signal power P at the input are numerically solved for a channel with constant spectral density and comparison of optimal linear coding and decoding is made with other types of optimum and non-optimum methods. There are 10 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J.P. Costas, Coding with linear systems, Proc. I.R.E., 1952, 40, 9, 1101.

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

35460

S/109/62/007/003/002/029
D234/D302

6.9500 (1329)

AUTHOR: Tsybakov, B.S.

TITLE: Linear coding of images

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 3, 1962, 375 - 385

TEXT: The author considers the transmission of a motionless two-dimensional image, on the basis of the theory of information, and studies two-dimensional linear methods of its coding and decoding. Transformations of two-dimensional images known in optics are applied to solving the problem. It is stated that these methods allow the quality of the transmitted image to be improved. An idealized two-dimensional transmission channel is constructed for the purpose. Optimum characteristics of the coding and decoding filters and the mean square error corresponding to them are calculated. An isotropic image with an exponential correlation function is considered as an example. There are 4 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language pub-

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

S/109/62/007/003/002/029
D234/D302

Linear coding of images

lications read as follows: P. Elias, D.S. Grey, D.L. Robinson, J. Opt. Soc. America, 1952, 42, 2, 127; T.P. Cheatham, A. Kohlenberg, Convent, Rec. IRE, National Convent, 1954, pt. 4, p. 6-12; E.L.O. Neill, IRE, Trans. Information Theory, 1956, IT-2, 2, 56.

SUBMITTED: September 9, 1961

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

SIFOROV, V.I.; TSYBAKOV, B.S.

Development of the information theory in the U.S.S.R. Part 1. General survey of papers. Izv. AN SSSR. Tekh. kib. no.5: 74-78 S-O '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.

Theory of the transmission of images. Izv. AN SSSR. Tekh. kib. no.5:95-98 S-O '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

DOBRUSHIN, R.L.; TSYBAKOV, B.S.

Transmission of information with additional noise. Probl.. pered. inform. no.14:21-42 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

L 33249-66 EWT(d)/EWP(1) IJP(c) GG/BB

ACC NR: AP6004984 SOURCE CODE: UR/0406/65/001/001/0026/0040

45
43
B

AUTHOR: Tsybakov, B. S.

ORG: None

TITLE: Transmission capacity of a vector Gaussian channel without memory 16

SOURCE: Problemy peredachi informatsii, v. 1, no. 1, 1965, 26-40

TOPIC TAGS: Gaussian channel, transmission line, computer memory

ABSTRACT: The purpose of this article is the study of the transmission capacity of a vector channel having Gaussian relative distribution of signal values (with fixed signals at the inputs). The mathematic model of a vector channel investigated allows for the presence of "intersecting" distortions between the various input signals, accounts for the fact that the medium in which the propagation occurs is a disperging one, and also accounts for the possible relationships between the fluctuating noises which are superimposed on the signals at the various outputs. A search is made for the transmission capacity of a vector channel. It is shown that the arbitrary vector channel of the type under investigation is equivalent to a canonical vector channel composed of a definite number (which is not greater than the minimal of the numbers n and m) of the independent Gaussian channels without memory operating in parallel. Conditions are given for the singularity of the vector channel, which, when satisfied, make the transmission capacity infinitely great. The results which pertain to the Gaussian vector discrete channel without memory are given in the present article. In conclusion, the author considers it his

Card 1/2 UDC 621.391.133

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

L 33249-66

ACC NR: Ap6004984

2

pleasant duty to express his deep appreciation to R. L. Dobrushin and M. S. Pinsker for continuous discussions on the questions raised in this work. Orig. art. has: 3 figures and 105 formulas.

SUB CODE: 09 / SUBM DATE: 20Sep64 / ORIG REF: 006 / OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.

Capacity of the vector Gaussian memoryless channel. Probl. pered. inform. 1 no.1:26-40 '65. (MIRA 18:7)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S. (Moskva)

Comparative effectiveness of optimum linear and nonlinear methods for coding continuous communications. Izv. AN SSSR. Tekh. kib. no.4:42-52 Jl-Ag '64. (MIRA 17:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

[illegible]/0042/0052

[illegible] equation

[illegible] where [illegible] is the (-entropy [illegible]) To facilitate the

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

L 8027-65

ACCESSION NR: AP4044822

calculation of ε^2, explicit expressions for $H(\varepsilon)$ and C are derived

tral density of the message (with the exponential correlation func-

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOVA, E.T.

11F

The mechanism of phosphorylation as related to respiration. V. A. Berlitser and E. T. Tsybakova. *Biokhimiya* 4,516-35(1939). - Without creatine, adenylic acid and glucose when added to tissues act as phosphate acceptors in respiratory phosphorylation. The ratio of the amt. of phosphagen (in mols.) synthesized to the mols. of absorbed O at 0°, is 3.8-4.3, if complete respiration is taken into account, and 5.0-7.3 if "excess" respiration prevails. Phosphorylation is not only accompanied by a dehydrogenation of the substrate, but also by an oxidation-reduction process, as in the case of the aerobic oxidation of succinic to fumaric acid. H. Priestley

Lab. of Chem. Metabolism, Dept. of Physiological Chem. Viem. Moscow

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOVA, E.T.

Ch

119

Oxidative phosphorylation in muscle tissue. E. T. Tsybakova. *Biokhimiya* 5, 368-74(1940); cf. Belitser and Tsybakova, *C. A.* 34, 5914[4].—A further study is made of the substrates whose oxidation is accompanied by phosphorylation. The action of poisons on respiratory phosphorylation is also investigated. Na selenite, Cu salts and phlorizin inhibit the synthesis of phosphocreatine, although respiration is affected to a lesser extent. Na malonate is more effective in inhibiting oxidation than phosphorylation. In the oxidation of glutamic acid by cardiac muscle, phosphocreatine is simultaneously formed from creatine and inorg. phosphate; addn. of arsenite completely stops both processes. H. Priestley

Lab. of metabolic Research, Dept. of Physiological Chem Tsem, Moscow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOVA, Ye. T.

"Concerning Variations in Calcium-Phosphorus Metabolism in Cases of Chondroperichondritis of the Larynx," Sub 22 Feb 47, Inst of Nutrition, Acad Sci USSR.

Dissertations presented for degrees in science and engineering in Moscow in 1947.
SO: Sum.No.457, 18 Apr 55

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOVA, Ye.T., assistent.

Pyroracemic acid content of healthy "normal" teeth and of carious teeth in man. Stomatologiia no.2:15-19 Mr-Ap '54. (MLRA 7:4)

1. Iz kafedry biokhimii (zaveduyushchiy - professor A.E.Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta (direktor - dotsent G.N.Beletskiy). (Teeth) (Pyroracemic acid)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOVA, Ye. T. Cand. Biolog. Sci.

Dissertation: "Concerning Variations in the Calcium-Phosphorus Exchange in Cases of Chondro-Perichondritis of the Larynx." Inst of Nutrition, Acad Sci USSR, 22 Feb 47.

SO: Vechernyaya Moskva, Feb, 1947 (Project #17836)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

VAYNER, L.S.; KOLESNICHENKO, N.G.; TSYBAN' E.P.

Mass surveys as a method for detecting tuberculosis in rural areas. Sov.zdrav. 15 no.4:41-42 Jl-Ag '56. (MLRA 9:9)

1. Iz organizatsionno-metodicheskogo otdela (zav. S.I.TSesarskaya) Odesskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir.-kandidat meditsinskikh nauk M.A.Brusnikin)

(TUBERCULOSIS, prevention and control,
in Russia, mass surveys in rural areas (Rus))
(RURAL CONDITIONS,
tuberc. mass surveys in Russia (Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

AKSEL'ROD, L.B.; DUBOVYY, Ye.D.; GOLBAN, N.D.; KONSHIN, A.A.; TSITKO, T.M.; TSYBAN', E.P.

Course of experimental tuberculosis under the influence of ionizing radiations. Med.rad. 4 no.12:48-52 D '59. (MIRA 13:5)

1. Iz Odesskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. M.A. Brusnikin) i kafedry rentgenologii (zav. - prof. Ye.D. Dubovyy) Odesskogo meditsinskogo instituta imeni N.I. Pirogova.
(TUBERCULOSIS exper.)
(RADIATION EFFECTS exper.)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAN', I. A.

Spinal Cord-Surgery

Modified method of dissecting the spinal cord by the frontal approach. Arkhiv. pat. 14, no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBAKOV, B.S.; YAKOVLEV, V.P.

Structure of functions with a limited spectrum and associated problems of the information theory. Trudy MFTI no.2:13-29 '58. (MIRA 11:12)

(Information theory)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

PALLADIN, A.V., akademik; FEDORCHENKO, I.M., akademik; GULYY, M.F., akademik; BAKULIN, D.I.; MEL'NIKOV, N.P., kand.tekhn.nauk; OKERBLOM, N.O., prof., doktor tekhn.nauk; LYUBAVSKIY, K.V., prof. doktor tekhn.nauk, laureat Stalinskikh premiy; PORTNOY, N.D., kand.tekhn.nauk; TSYBAN', N.G.; KULIKOV, M.S., dotsent; AGRONOMOV, S.N., inzh.; POLYAKOV, V.A., inzh.; SHERSTYUK, V.N., inzh.

Congratulations on the publication of the issue no.100 of the "Avtomaticheskaia Svarka" journal. Avtom.svar. 14 no.7: 3-8 Jl '61. (MIRA 14:7)

1. Prezident AN USSR (for Palladin). 2. AN USSR, glavnyy uchenyy sekretar' AN USSR (for Fedorchenko). 3. AN USSR, predsedatel' redaktsionno-izdatel'skogo soveta AN USSR (for Gulyy). 4. Uchenyy sekretar' AN USSR (for Bakulin). 5. Direktor instituta "Proyektstal'konstruktsiya" (for Mel'nikov). 6. Predsedatel sektsii svarochnogo proizvodstva Tekhniko-ekonomicheskogo soveta Leningradskogo sovnarkhoza (for Okerblom). 7. Glavnyy svarshchik Uralvagonzavoda (for Portnoy). 8. Glavnyy inzh. zavoda im. Nosenko (for TSyban'). 9. Dal'nevostochnyy politekhnicheskiy institut im. V.V.Kuybysheva (for Kulikov). 10. Dal'zavod (for Agronomov, Polyakov). 11. Dal'nevostochnyy nauchno-issledovatel'skiy institut po stroitel'stvu (for Sherstyuk).

(Electric welding--Periodicals)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

GETMANETS, V.V.; TSYBANEV, Ye.G.; CHERKASHIN, A.P.

Grooving the rolls of the roughing stand of continuous wire rod mills. Metallurg 10 no.10:26-28 O '65. (MIRA 18:10)

1. Krivorozhskiy metallurgicheskiy zavod.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBANEV, Ye.G.; REYTMAN, Ya.M.

Useful book. Metallurg 9 no.3:37 Mr '64. (MIRA 17:3)

1. Sortoprokatnyy tsekh No.1 Krivorozhskogo metallurgicheskogo zavoda.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

OSTAPENKO, V.V.; TSYBANEV, Ye.G.; MELASHCHENKO, V.V.

Using inlet roller equipment on continuous rod mills. Metallurg 10 no.12:26-28 D '65. (MIRA 18:12)

1. Krivorozhskiy metallurgicheskiy zavod.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBANEVA, N.G.; TULENOV, M.T.; TURGANBAYEV, A.T.

Diagnosis of mitral stenosis as per materials of the Institute of Clinical and Experimental Surgery of the Academy of Sciences. of the Kazakh S.S.R. Trudy Inst. klin. i eksp. khir. AN Kazakh. SSR 9:8-14 '63. (MIRA 17:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBANEVA, N.G.

Changes in the electrocardiogram in mitral stenosis in connection with a mitral commissurotomy. Trudy Inst. klin. i eksp. khir. AN Kazakh. SSR 9:20-23 '63. (MIRA 17:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

IVANISHKIN, I.; TSYBANIN, N., navalokrepil'shchik; NISSEN, D., prokhodchik; FARKHULLIN, K.; KOLOKOL'TSEV, I., mashinist elektrovoza.

First steps. Mast. ugl. 7 no. 5:7-8 My '58. (MIRA 11:7)
(Socialist competition)
(Coal mines and mining)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBANOVA, M. S.

"Experimental Investigation of the Process of Deep Piercing." Sub 22 Nov 51, Moscow Order of the Labor Red Banner Inst of Steel imeni M. V. Lomonosov

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

ABDURAKHMANOV, T.R.; SYCHEV, A.G.; TSYBANOVA, V.A.

Electrocardiographic study of the effect of tinctures of certain plants of the genus Lagochilus. Med. zhur. Uzb. no.12:78 D '61. (MIRA 15:2)

1. Iz kafedry farmakologii (zav. - prof. I.E.Akopov) Kubanskogo meditsinskogo instituta.
(LAGOCHILUS) (ELECTROCARDIOGRAPHY)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYPASOV M. TODKLETNOY M. POPOV N.

Termicheskoye Razlozheniye Goryuchikh Slantsev Goryuchiye Slantsy, 1931, No 1,23

SO: Goryuchiye Slantsy # 1934-35, TN .871
G .74

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBASHEV, V.A.

KARIOFILLI, G.S., general-leytenant, redaktor; TSYBASHEV, V.A., polkovnik, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor.

[Field artillery mans's manual] Uchebnik soldata nazemnoi artillerii. Moskva, Voen.izd-vo M-va obor. SSSR. Vol.1. 1956. 295 p. (MLRA 10:6)

(Artillery, Field and mountain)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBASOV, V., POPOV, N., AND PODKLETNOV, M.

Termicheskoye Razlozheniye Goryuchikh Slantsev, Goryuchiye Slantsy, 1931, No. 1, 23.

SO: Goryuchiye Slantsy #1934-35, TN .871
G .74

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2

TSYBASOV, V.

Bitumenization of fine-grain slate. V. Tsybasov. *Novosti Neftyanoi Tekh., Neftepererabotka* 1951, No. 3, 10–12; cf. *C.A.* 49, 584c.—Work has shown that waste matter from the Near-Baltic slate mines can be successfully converted to useful materials suitable for road building and waterproofing. The slate is first ground to a fine powder in a ball mill and then heated in a rotating retort with 15% added tar. A 5-hr. heating period was used, of which the first 3 hrs. went toward the gradual attainment of temp. Of the 3 working temps. tried (360, 380–90, and 390–5°), the 380–90° conditions gave best results and yielded a product with a desirable softening point (59–60°). The latter can also be controlled by adding the tar in parts. If $^2/_3$ is added at the time of charging the retort and $^1/_3$ at the time of discharge, the resulting product has a softening point of 49–50° instead of the 59–60° value given by the product prepd. when all of the tar is added at the time of charging.

John A. Krynitsky

MT

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310005-2"