

ISAKOV, I.S.---(continued) Card 2.  
podpolkovnik, pomoshchnik glavnogo red. po izd-vu; SEDOV, N.Ye.,  
kapitan 2 ranga, uchenyy sekretar'; VOBOB'YEV, V.I., kapitan  
1 ranga, red.kart; MIGALKIN, G.A., inzh.-kapitan 1 ranga, red.kart;  
GAPONOVA, A.A., red.kart; GONCHAROVA, A.I., red.kart; GORBACHEVA,  
N.Ye., red.kart; GRYUNBERG, G.Yu., red.kart; DUROV, A.G., red.  
kart; YERSHOV, I.B., red.kart; ZIL'BERSHER, A.B., red.kart;  
KASTAL'SKAYA, N.I., red.kart; KUBLIKOVA, M.M., red.kart; MAKAROVA,  
V.N., red.kart; MOROZOVA, A.F., red.kart; PAVLOVA, Ye.A., red.  
kart; POCHUBUT, A.N., red.kart; ROMANOVA, G.N., red.kart; SMIRNOVA,  
L.V., red.kart; SMIRNOVA, I.N., red.kart; TANANKOVA, A.I., red.  
kart; YANEVICH, M.A., red.kart; YASINSKAYA, L.F., red.kart;  
VASIL'YEVA, Z.P., tekhn.red.; VIZIROVA, G.N., tekhn.red.; GOLOVANOVA,  
A.T., tekhn.red.; GOROKHOV, V.I., tekhn.red.; MALINKO, V.I., tekhn.  
red.; SVIDERSKAYA, G.V., tekhn.red.; CHERNOGOROVA, L.P., tekhn.red.;  
FURAYEVA, Ye.M., tekhn.red.

[Marine atlas] Morskoi atlas. Otv.red. I.S. Isakov. Glav.red.  
L.A. Demin. Izd. Morskogo general'nogo shtaba. Vol.1 [Navigation  
geography] Navigatsionno-geograficheskii. Zamestitel' otv. red.  
po I tomu V.A. Petrovskii. 1950. 83 maps. (MIRA 12:1)  
(Continued on next card)

ISAKOV, I.S.---(continued) Card 3.

1. Russia (1923- U.S.S.R.) Voenno-morskoye ministerstvo.
2. Nachal'nik Morskogo kartograficheskogo instituta voyenno-morskikh sil (for Lamykin).
3. Deystvitel'nyy chlen Akademii pedagogicheskikh nauk RSFSR (for Orlov).
4. Nachal'nik Gidrograficheskogo upravleniya voyenno-morskikh sil (for Tributs).
5. General'nyy gosudarstv. direktor topograficheskoy sluzhby (for Baranov).
6. Direktor topograficheskoy sluzhby (for Milenki).  
(Ocean--Maps) (Harbors--Maps)

VOLKOV, F. G.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Isakov, I. S.	"Marine Atlas" (Vol. 11)	Geographical Society of the USSR, Academy of Sciences USSR
Shuleykin, V. V.		
Demin, L. A.		
Vorob'yev, V. I.		
Seregin, M. P.		
Yegor'yeva, A. V.		
Smirnova, V. G.		
Kudryatsev, M. K.		
Babakhanov, A. C.		
Rudovits, L. F.		
Volkov, F. G.		
Salishchev, K. A.		
Orlov, B. P.		
Kalesnik, S. V.		
Shvede, Ye. Ye.		
Snezhinskiy, V. A.		
Pogosyan, Kh. P.		
Drozhdov, O. A.		

SO: W-30604, 7 July 1954

VOLKOV, F.I.

KHETAGUROV, G.D.; DOBROSERDOV, Ye.I.; YERGALIYEV, A.Ye.; ~~VOLKOV~~  
~~F.I.~~

Practice of applying high productive systems of mining in  
certain mines. Vest. AN Kazakh. SSR 11 no.9:80-91 S '54.  
(Mining engineering) (MLRA 8:2)

USSR / Forestry. Forest Crops.

K-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72822.

Author : Volkov, F. I.

Inst : Institute of Forestry, AS USSR

Title : Some Data on the Influence of Thinning of Timber  
Stands and of Soil Friability on Fruit Bearing of  
Oak.

Orig Pub: Soobshch. In-ta lesa. AN SSSR, 1957, vyp. 8, 3-12.

Abstract: By investigations of the foothill leafy forests of I-II quality of the Tellermanov Leskhoz (Baishovskaya Oblast), the dependence was established of the degree of acorn harvest on the farming improvements in the mixed forest plots. Thinning of mixed leafy forests to a thickness of 0.6 by means of cutting out accompanying species, asp and birch first, aids preservation of moisture and soil

Card 1/2

USSR / Forestry. Forest Crops.

K-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72822.

Abstract: nutrients, improving conditions for cross-fertilization. This measure, along with simultaneous cultivation of the soil by 2-meter strips for half the area, contributed to a 2.5-fold harvest increase on the experimental plots. Cutting out part of the underbrush, cleaning down timber out of the plots and uprooting stumps also provided a 2.0-2.5-fold greater acorn harvest than in the usual conditions. Spraying the branches in the flowering period with a 0.005 concentration of boric acid in experiments at the Main Botanic Garden AS USSR gave a 1.5-fold increase in the quantity of acorns on 31 August over that of the controls. -- D. I. Deryabin.

VOLKOV, F.I.

Effect of foliar feeding with boron on acorn yields.  
Biul. Glav. bot. sada no.31:109-111 '58. (MIRA 12:5)

1. Institut lesa AN SSSR.

(Plants, Effect of boron on)  
(Acorns)

VOLKOV, F. I.

32606. VOLKOV, F. I. Onaibolee zffektivnom ispol'zovanii lesnykh semyan. les i step', 1949, No 3, s. 12-17

SO: Letopis' Zhurnal' nykh Statey, Vol. 44



VOLKOV, F.I.

~~How the thinning of stands and scarifying of soil affects the~~  
fruiting of oaks. Soob. Inst. lesa no.8:3-12 '57. (MIRA 11:5)  
(Oak) (Forest thinning)

VOLKOV, F.I.

~~\_\_\_\_\_~~  
Basis for some methods for sowing acorns. Trudy Inst. lesa 38:  
51-58 '58. (MIRA 11:10)

(Acorns)

VOLKOV, F. I.

Acorns

Specific weight of acorns as an index of ripeness and quality. Dokl. AN SSSR #5 No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

VOLKOV, F. I.

Seed Industry and Trade

Cultivation of forests and organization of seed growing farms. Les. Khoz., 4, no. 12, 1951

Monthly List of Russian Accessions. Library of Congress. April 1952. UNCLASSIFIED.

VOIKOV, F. I.

Forests and Forestry

Cultivation of forests and organization of seed growing farms. Les. khoz. 4 no. 12, 1951

Monthly List of Russian Accessions. Library of Congress, April 1952. UNCLASSIFIED.

VOLKOV, F. I.

USSR/Mining Methods  
Explosives

Feb 49

"The Development of Exploitation Systems Using Torpedo Holes for Ore Breaking in the Krivoy Rog Basin," G. M. Malakhov, A. D. Polishchuk, F. I. Volkov, 6 pp

"Gor Zhur" No 2

Deep torpedo holes for ore breaking may be used on ores with strength less than 8, where width of the vein is not less than 10 meters. The system is being used successfully in Krivoy Rog Basin.

PA 40/49T82

VOZNESENSKIY, Lev Aleksandrovich; VOLKOV, Feliks Mikhaylovich;  
SHVEYTSEY, Ye.K., red.; PAVLOVA, A., tekhn. red.

[How to fulfill the work on tests and term papers in economics; aid for the correspondence school students of institutions of higher learning] Kak vpolnit' kontrol'-nuiu i kursovuiu raboty po politicheskoi ekonomii; posobie studentam-zaochnikam VUZOV. Moskva, Gosizd-vo "Vysshaya shkola," 1960. 28 p. (MIRA 16:7)  
(Economics--Study and teaching)

TSAGOLOV, N.A., prof., red.; KHESSIN, N.V., dotsent, red.. Primali . . .  
uchestnye: SOLODKOV, M.V., dotsent; CHERKOVETS, V.N., kand.ekon.  
nauk; VOLKOV, F.M., kand.ekon.nauk; VOZNESENSKIY, L.A., nauchnyy  
sotrudnik. GORDEYEVA, L.N., red.; YERMAKOV, M.S., tekhn.red.

[Problems of political economy] Voprosy politicheskoi ekonomii.  
Pod red. N.A.TSagolova i N.V.Khessina. Moskva, 1960. 278 p.  
(MIRA 13:4)

1. Moscow. Universitet.  
(Economics)



VOLKOV, Feliks Mikhaylovich, prepodavatel'; BUDARINA, V., red.; GRIGOR'YEVA, I.,  
mladshiy red.; CHEPELEVA, O., tekhn. red.

[Expanded replacement of skollled labor in the U.S.S.R.] Rasshirennoe  
vosproizvodstvo kvalifitsirovannoi rabochei sily v SSSR. Izd-vo  
sotsial'no-ekon. lit-ry, 1960. 205 p. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet (for Volkov)  
(Labor supply)

YAGODKIN, Vladimir Nikolayevich; VOLKOV, F.M., red.; OZIRA, V.Yu.,  
red.; YERMAKOV, M.S., tekhn.red.

[Socialist reproduction] Sotsialisticheskoe vosproizvodstvo.  
Moskva, Izd-vo Mosk.univ., 1960. 74 p.

(MIRA 14:2)

(Economics)

VOLKOV, Feliks Mikhaylovich; VOZNESENSKIY, Lev Aleksandrovich; TSYPKINA,  
F.L., red.; YELAGIN, A.S., tekhn. red.

[Communism is born in work; the role of collectives and shock  
workers of communist labor in the building of communism] Kom-  
munizm rozhdaetsia v trude; o roli dvizhenia kollektivov i udarnikov  
kommunisticheskogo truda v stroitel'stve kommunizma. Moskva, Izd-vo  
"Sovetskaia Rossiia," 1961. 74 p. (MIRA 14:12)

(Labor and laboring classes)

VOLKOV, F. N.

Mowing Machines

Better use of self-propelled hay mowers. Korm. baza 3 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

VOLKOV, F.N. (Moscow)

Hypnosis as a method of psychotherapy in polyclinical practice.  
Klin.med. 32 no.9:35-41 S '54. (MLRA 7:12)

1. Iz Polikliniki No. 42 Krasnopresnenskogo rayona Moskvy.  
(HYPNOSIS, therapeutic use)

VOIKOV, F. N.

Hay stacker

Moskva, Ministerstvo sel'skogo khoziaistva SSSR, 1955

1. Agricultural machinery.

VOLKOV, F.S.; LIPSHITS, N.V.

Complete modernization of equipment. Tekst.prom. 19 no.10:  
65-68 0 '59. (MIRA 13:1)

1. Nachal'nik Upravleniya legkoy promyshlennosti Bryanskogo  
sovnarkhoza (for Volkov). 2. Glavnyy inzhener Upravleniya legkoy  
promyshlennosti Bryanskogo sovnarkhoza (for Lipshits).  
(Bryansk Province--Textile industry)

VOLKOV, F.V., student

In field practice. Zashch. rast. ot vred. i bol. 9 no.7:11412 '64.  
(MIRA 1812)

1. Gor'kovskiy sel'skokhozyaystvennyy institut.



VOLKOV, G. (Lt. Gen. Air Engineer Service)

"Organization Problems of the Air Engineer Service", Vestnik Vozdushnovo Flota,  
No. 10, October 1946.

SO: Translation W-418, 22 Apr. 1948.

VOLKOV, G.

Economic efficiency of surface coal mining. Vop.ekon. no.2:23-33  
F '57. (MLRA 10:5)  
(Coal mines and mining)

VOLKOV, G., kotel'shchik-montazhnik; MIZIN, V., master vzryvnik; ZAKIROV, G.,  
elektroslesar'; SHAPIRO, G.

More but not merrier. Okhr. truda i sots. strakh. 5 no.9:36 Ag '62.  
(MIRA 15:7)

1. Predsedatel' tsakhovogo komiteta Kuznetskogo metallurgicheskogo zavoda (for Volkov). 2. Strakhovoy delegat shakhty imeni Kalinina Kemerovskaya obl. (for Mizin). 3. Shakhta "Koksovaya-1", Kemerovskaya obl. (for Zakirov). 4. Spetsial'nyy korrespondent zhurnala "Okhrana truda i sotsial'noye strakhovaniye" (for Shapiro).

(Kemerovo Province--Health resorts, watering places, etc.)

VOLKOV, G.

Machines and the harvest. Sov.profsoiuzy 18 no.10:5-7 My '62.  
(MIRA 15:5)

1. Zvestitel' predsedatelya Vsesoyuznogo ob'yedineniya Soveta  
Ministrov SSSR po prodazhe sel'skokhozyaystvennoy tekhniki,  
zapasnykh chastey, mineral'nykh udobreniy i drugikh material'no-  
tekhnicheskikh sredstv, organizatsii remonta i ispol'zovaniya  
mashin v kolkhozakh i sovkhozakh.  
(Farm mechanization) (Tractors)

GORBUNOV, N.; VOLKOV, G.; CHAYKA, Z.

Increasing labor productivity in open-cut coal mines. Biul.nauch.  
inform.:trud i zar.plata 3 no.9:3-7 '60. (MIRA 13:9)  
(Strip mining--Labor productivity)

VOLKOV, G

Silovye ustanovki samoletov. Leningrad, Leningradskaaia krasnoznamennaia voen-  
no-vozdushnaia inzhenernaia akademiia, 1947. 352 p.

Title tr.: Aircraft power plants.

NCF

SU: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

1. VOLKOV, G.
2. USSR (600)
4. Amateur Theatricals
7. Opera in a textile workers' club, Sov.soiuz no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

VOLKOV, G.

Planning the number of auxiliary workers. Sots.trud 4 no.7:  
87-92 J1 '60. (MIRA 13:8)  
(Kharkov--Tractor industry)



VOLKOV, G.

New machines go to fields. NTU 4 no.5:6-9 My '62. (MIRA 15:5)

1. Zamestitel' predsedatelya Vsesoyuznogo ob'yedineniya Soveta  
Ministrov SSSR "Soyuzsel'khoztekhnika".  
(Agricultural machinery)

VOLKOV, G., kand.tekhn.nauk

Flight on a rocket-propelled aircraft. Kryl.rod. 13 no.2:30-31  
F '62. (MIRA 15:1)

(Rockets in transportation)

VOLKOV, G.A.

Energy spectra of electrons at various points of an irradiated  
medium. Fiz. tver. tela 3 no.2:354-359 F '61. (MIRA 14:6)

1. Agrofizicheskiy institut, Leningrad.  
(Electrons—Spectra)

12. 11. 1961

study of the rearing potential of *intra-specific* of the alga  
*Blattaria flexilis*. Report on: changes in the resting potential  
during mass germination of cells by light and darkness. *Tsitologiya*  
*Sov. Akad. Nauk* 1961, No. 11. (MIRA 13:3)

.. *Fabrikatsiya* *rahnabonay* *Mofizik* *rasvany* *Agrofizicheskiye*  
*vestnik*, Leningrad.

VOLKOV, G.A.; RIK, G.R.

On the problem of  $\alpha$ -dosimetry in marginal region of heterologous  
media. Biofizika 5 no.1:60-68 '60. (MIRA 13:6)  
(RADIOMETRY)

YEVIYEVA, Ye.; VOLKOV, G.

All-woven driving belts made of synthetic fibers. Mashinostroitel'  
no.1:27 Ja '62. (MIRA 15:1)

(Belts and belting)  
(Textile fibers, Synthetic)

S/183/60/000/02/07/025  
B004/H005

AUTHOR: Volkov, G. A., Chief Engineer

TITLE: Report

PERIODICAL: Khimicheskiye volokna, 1960, No. 2, pp. 17 - 18

TEXT: This report was delivered at the Branch Conference of the Synthetic Fiber Industry in Klin, December 16-18, 1959. The lecturer mentions the production faults of his factory. The weaving mill fabrika "Krasnaya Roza" ("Red Rose" Factory) found 0.11 - 0.36 breakages per 1 kg of rayon. The measures taken to improve the quality are enumerated. The technical regulations are still not being observed. The Krasnoyarskiy sovnarkhoz (Krasnoyarsk sovnarkhoz) is requested to help with the supply of stainless steel tubes. Production of cord fiber was started with difficulties in May 1959. Workers were missing, the rubberized pipes of the zavod "X let Oktyabrya" ("10 Years of October" Works) were useless, the assembly was carried out badly. Errors were made by the GIPROIV (State Institute for the Design and Planning of Synthetic Fiber Industry Establishments) in planning the factory. The Upravleniye khimicheskogo volokna Goskomiteta Soveta Ministrov SSSR po khimii (Administration for Chemical Fibers of the State

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S/183/60/000/02/01/000  
B004/B005

Committee on Chemistry of the Council of Ministers USSR) is to secure the supply of oiling agents. The cellulose of the Priozerskiy kombinat (Priozersk Kombinat) is of inferior quality. Caustic soda contains 130 mg/l of iron oxides. The supply of spare parts is deficient. The zavod im. K. Marksa (Works imeni K. Marx) produces no spare parts for the spinning frames of the type PN-300-IZ. The Rosglavmashty entrusted the production of these spare parts to the "10 Years of October" Works but no molds are available there for this purpose. The VNIIV (All-Union Scientific Research Institute of Synthetic Fibers) should better care for its branches which are doing nothing at all. Research work done by the VNIIV does not fulfill the demands of industry. Rationalization is being carried on in the lecturer's factory, but other factories in Krasnoyarsk, such as zavod sinteticheskogo kauchuka (Synthetic Rubber Works), gidroliznyy zavod (Hydrolysis Works) show better results. Automation in the synthetic fiber industry is backward. Not much knowledge can be acquired in the Klinkiy kombinat (Klin Kombinat) either. A model plant serving as a pattern for other factories should be erected.

ASSOCIATION: Krasnoyarskiy zavod (Krasnoyarsk Works)

Card 2/3



ACCESSION NR: AR5006790

S/0299/65/000/001/R026/R026

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. IR182

AUTHOR: Volkov, G. A.

22  
B

TITLE: Investigation of rest potential in a single cell of Nitella flexilis algae. 1. Change in rest potential of cell stimulated by light and darkness

CITEST SOURCE: Tsitolozhiya, 1965, 1, 1, 1-11

TOPIC TAGS: Nitella flexilis, cell, rest potential, light brightness

TRANSLATION: In switching from light to darkness, the rest potential of a single N. flexilis cell...

L 39310-05

ACCESSION NR: AR5006790

can be divided into 3 phases. The first phase - increase of rest potential depending on "previous history" of the process and illumination value for the cell. The second phase - decrease of rest potential. With ... rest potential changes, but the decrease value remains constant. Accomodation is observed with ...

Card 2/2

L 59325-65 EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(y)/EWT(1)/FS(v)-3 Pb-- DD

ACCESSION NR: AP5019330

UR/0020/64/155/005/1224/1226

AUTHOR: Volkov, G. A.

TITLE: Change in the rest potential of an individual cell of the alga nitella flexilis during stimulation by light

SOURCE: AN SSSR. Doklady, v. 155, no. 5, 1964, 1224-1226

TOPIC TAGS: algae, plant sensibility, light biologic effect

ABSTRACT: The effect of light stimulus from an incandescent lamp on the rest potential was investigated on individual cells of the alga Nitella flexilis, cultured in medium above layers of river silt and quartz sand, under 12-hour fluorescent lighting. A definite transition process was observed upon passage from darkness to light and vice versa. The darkness-to-light reaction consisted of three characteristic phases: a small increase in the rest potential directly after the light was turned on, lasting 5-20 minutes; a pronounced front of decrease in the rest potential; the basic reaction to the stimulus; and a quenching vibrational process or an asymptotic approach to a new stationary state. When the light is again turned off, the reaction

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L 59355-65

ACCESSION NR: AP5019330

is gradually extinguished against a background of the developing light-to-darkness reaction. The light-to-darkness reaction is simpler and usually more stable: immediately after the light is turned off, the rate of change of the rest potential is a maximum and directed toward negative values; it decreases rapidly, passing through zero, and changes direction. In the case of short light flashes after prolonged darkness, and vice versa, the resultant variation of the rest potential represents a competition of the initial stages of the darkness-to-light and light-to-darkness reactions, and hence possesses an anomalous appearance.

Orig. art. has: 3 graphs.

ASSOCIATION: Agrofizicheskiy nauchno-issledovatel'skiy institut (Agrophysical Scientific Research Institute)

SUBMITTED: 07Jun63

ENCL: 00

SUB CODE: LS, OP

NR REF SOV: 003

OTHER: 007

JPRS

Card 2/2 *lyp*

Volkov, G.A.

21(4) PHASE I BOOK EXPIRATION 809/2711

International Conference on the Peaceful Use of Atomic Energy. 2nd, Geneva, 1958

Mezely sovetskikh uchenykh; Yednomye goryuchye i reaktorovye metalli. (Reports of Soviet Scientists: Nuclear Fuel and Reactor Metals) Moscow, Akademiya, 1959. 670 p. (Series: 12; Trudy, vol. 3, 8,000 copies printed.)

21. (Title page): A.A. Kocher, Academician, A.P. Vinogradov, Academician, V.I. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zaitov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pavlovskiy and O.M. Pavlovskiy; Tech. Ed.: E.I. Masal'.

**PURPOSE:** This volume is intended for scientists, engineers, physicists, and biologists working in the production and peaceful application of atomic energy; for professors and higher technical education of atomic interested in atomic science and technology.

**CONTENTS:** This is volume 3 of a 3-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Use of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallurgy, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond to the word for word in the official English language edition on the Conference proceedings. See 809/2061 for the titles of the other volumes in the set.

215. Zaitov, A.P., G.A. Pavlovskiy, G.D. Gidalyay, I.V. Kikulya, V.A. Pavlovskiy, and M.S. Pavlovskiy. Parasitic Associations of Hydrothermal Brackish Waters. 110 - In Uranium Deposits of the Soviet Union (Report No. 2201)

216. Gerstner, A.I., S.D. Iskhak, R.A. Volkov, A.K. Kifitsin, and V.S. Strebrovnikov. Some Characteristics of Uranium Distribution in Underground Waters (Report No. 899) 134

217. Gerstner, A.I., S.D. Iskhak, R.A. Volkov, A.K. Kifitsin, and V.S. Strebrovnikov. New Data on Uranium Minerals in the USSR (Report No. 2060) 160

218. Belashovich, Yu. P., M.Y. Kravchenko, A.I. Il'inskiy, M.M. Shtol'ts, I.M. Kocherzhevskiy, B.A. Shchegolov, and N.E. Krasovskiy. Some Theoretical and Methodical Problems of Radiometric Prospecting and Survey (Report No. 2505) 199

219. Belashovich, Yu. P. The Gamma-ray Detection Method for Classifying Anomalies in Radioactivity (Report No. 2245) 218

220. Konda, G.A., and M.L. Skirnichenko. Some Problems of Radiometric Uranium Ore Concentration (Report No. 2081) 227

Card 4/11

VOLKOV, G.A. (Moskva)

Choice of optimum magnitude of power reserve in an electric power system. Izv. AN SSSR. Otd. tekhn. nauk. Energ. i transp. no.3:257-265 My--Je '63. (MIRA 16:8)

MARKOVICH, I.M. (Moskva); VOLKOV, G.A. (Moskva)

Basic principles of the determination of optimum power  
reserve in an electric power system. Izv. AN SSSR. Otd. tekhn.  
nauk. Energ. i transp. no.3:251-256 My-Je '63.

(MIRA 16:8)

20107

S/181/61/003/002/005/050  
B102/B204

26.2246

AUTHOR: Volkov, G. A.

TITLE: The electron energy spectra in various points in an irradiated medium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 2, 1961, 354-359

TEXT: It was the purpose of the present paper to solve the electron transport equation by means of an expansion into a polynomial of the required distribution function. When working with  $\beta$ -active isotopes it is of importance to know the electron spectrum in the various point of the irradiated medium. For the case of a plane source of given electron energy distribution, which is located in an infinite, isotropic and homogeneous medium, the following electron transport equation is obtained considering the scattering of electrons as well as their energy losses by ionization and atom excitation

$$\frac{\partial J(\xi, \mu, \eta)}{\partial \eta} + \mu \frac{\partial J(\xi, \mu, \eta)}{\partial \xi} = \int d\Omega' N r_0 \sigma(\eta, 0) [J(\xi, \mu', \eta) - J(\xi, \mu, \eta)] + \frac{\delta(\xi) f(\eta)}{4\pi}. \quad (1)$$

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20107

S/181/61/003/002/005/050  
B102/B204

The electron energy spectra...

$J(\xi, \mu, \eta)$  is the electron distribution function,  $N$  is the number of atomic scatterers per gram of substance,  $\sigma(\eta, \theta)$  - the scattering cross section per solid angle unit,  $r_0$  - the longest path of an electron with maximum energy given in  $g/cm^2$ ;  $\xi$  is the z-component of the place at which the electron is located in  $r_0$ -units,  $(-1 \leq \xi \leq 1)$ ;  $\eta$  is the real path covered by an electron from the source (xy-plane) up to the place on the z-axis (in  $r_0$ -units);  $0 \leq \eta \leq 1$ ;  $f(\eta)$  is the initial energy distribution of the electrons;  $\mu = \cos \psi$ , where  $\psi$  is the angle between the z-axis and the direction of motion of the electron. As ansatz for the solution of (1),

the Legendre expansion  $J(\xi, \mu, \eta) = \frac{1}{4\pi} \sum_{l=0}^{\infty} (2l+1) P_l(\mu) J_l(\xi, \eta)$  (2) is

obtained. The scattering cross section is assumed to be

$\sigma(\eta, \theta) = \frac{\Lambda(Z)}{\eta} (1+2\psi - \cos\theta)^{-2}$ , where  $\Lambda(Z)$  is a constant depending on  $Z$ , and  $\psi$  is the screening number

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The electron energy spectra...

$$\psi = \frac{1}{4} \left[ \frac{Z^{1/3}}{0.883 \cdot 137} \right]^2 \frac{1}{T(T+2)} \left[ 1.13 + 3.76 (Z/137)^2 \frac{(T+1)^2}{T(T+2)} \right];$$
 Z is the atomic number of the medium, T - the electron energy in  $mc^2$ -units. Thus,  

$$\sigma_1(\eta) = \frac{A(Z)}{2\eta} \frac{\partial}{\partial(2\psi)} [Q_1(1+2\psi) - Q_0(1+2\psi)] = d_1/\eta,$$
 where  $Q_1$  is a Legendre function of the second kind. As  $J_1(-\xi, \eta) = (-1)^1 J_1(\xi, \eta)$ , it is possible to represent  $J_1(\xi, \eta)$  by even and odd components:

$$J_{2l}^{(2\alpha)}(\xi, \eta) = w^{(2\alpha)}(\xi) \sum_{n=0}^{\infty} J_{2l, n}(\eta) \mathfrak{M}_n(\xi), \quad (10)$$

$$J_{2l+1}^{(2\alpha+1)}(\xi, \eta) = w^{(2\alpha+1)}(\xi) \sum_{n=0}^{\infty} J_{2l+1, n}(\eta) \mathfrak{N}_n(\xi). \quad (11) \quad \checkmark$$

Here,

$$w^{(2\alpha)}(\xi) = \frac{1}{4} \xi^{2\alpha} |\xi| u(\xi), \quad (12)$$

$$w^{(2\alpha+1)}(\xi) = \frac{1}{4} \xi^{2\alpha+1} \sqrt{|\xi|}, \quad (13)$$

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The electron energy spectra...

where  $u(\xi) = \ln(1/\xi^2)$ . The even functions  $\mathcal{M}_n(\xi)$  and  $\mathcal{N}_n(\xi)$  are given by

$$\mathcal{M}_n(\xi) = \sum_{j=0}^n a_{nj} \left(\frac{u(\xi)}{2}\right)^j, \quad (14)$$

$$\mathcal{N}_n(\xi) = \sum_{j=0}^n a_{nj} \left[\frac{u(\xi)}{4}\right]^j. \quad (15)$$

They are orthogonal and normalized with respect to the polynomials

$$\mathcal{M}_n^{(2n)}(\xi) = \frac{1}{\xi^{2n} |\xi|} \sum_{j=0}^n b_{nj} \left[\frac{u(\xi)}{2}\right]^{2j}, \quad (16)$$

$$\mathcal{N}_n^{(2n+1)}(\xi) = \frac{1}{\xi^{2n+1} |\xi|} \sum_{j=0}^n b_{nj} \left[\frac{u(\xi)}{4}\right]^{2j+1}. \quad (17)$$

The coefficients of these equations may be determined by solving the equations

$$\sum_{j=0}^n a_{nj} \Gamma(2N+j+2) = 0, \quad N=0, 1, 2, \dots, (n-1), \quad (18)$$

$$\sum_{j=0}^n b_{nj} \Gamma(N+2j+2) = 0, \quad N=0, 1, 2, \dots, (n-1). \quad (19)$$

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The electron energy spectra...

with an accuracy of up to one constant; the constants must be found from the normalization conditions. Thus, the following general solution results:

$$\mathfrak{M}_n(\xi) = \frac{(-1)^n}{2} \sum_{k=0}^n (-1)^k \binom{2n+1}{k} \sum_{j=0}^{n-k} \binom{n+j}{j} \frac{1}{2^j} \frac{\left[\frac{u(\xi)}{2}\right]^{n-k-j}}{\Gamma(n-k-j+1)}, \quad (20)$$

$$\mathfrak{M}_n^{(2\alpha)}(\xi) = \frac{1}{\xi^{2\alpha} |\xi|} \sum_{k=0}^n (-1)^k \binom{n}{k} \frac{\left[\frac{u(\xi)}{2}\right]^{2k}}{\Gamma(2k+2)}. \quad (21)$$

$\binom{p}{q} = \Gamma(p+1)\Gamma^{-1}(q+1)\Gamma^{-1}(p-q+1)$ . These equations are not well suited for practical computations. However, by the recurrence formulas

$$\mathfrak{M}_{n+2}(\xi) = \alpha_1 \mathfrak{M}_{n-1}(\xi) + \alpha_2 \mathfrak{M}_n(\xi) + \alpha_3 \mathfrak{M}_{n+1}(\xi), \quad (23)$$

$$\mathfrak{N}_{n+2}(\xi) = \alpha_1 \mathfrak{N}_{n-1}(\xi) + \alpha_2 \mathfrak{N}_n(\xi) + \alpha_3 \mathfrak{N}_{n+1}(\xi), \quad (24)$$

$$\alpha_1 = \frac{(2n+1)n}{2(n+1)(n+2)}, \quad (25a) \quad \times$$

$$\alpha_2 = -\frac{(6n^2 + 8n + 3) \cdot 8 - u^2(\xi)}{16(n+1)(n+2)}, \quad (25b)$$

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The electron energy spectra...

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$$\alpha_2 = - \frac{(6n^2 + 8n + 3) \cdot 32 - u^2(\xi)}{64(n+1)(n+2)}, \quad (25b)$$

$$\alpha_3 = \frac{6n+7}{2(n+2)}. \quad (25r)$$

$\mathcal{M}_n(\xi)$  and  $\mathcal{N}_n(\xi)$  may be calculated by means of computers. Up to  $n \approx 250$  such computations were carried out by means of the electronic computer "Ural"; some results are shown in Fig. 1. For the case of a  $\text{Ca}^{45}$ -surface source in organic glass, the initial energy distribution was approximated by  $f(\eta) = 4\eta^{0.5}(1-\eta)^{0.5}$ , and the computation was restricted to the two first moments of the function  $J_1(\xi, \eta)$ . The energy spectra obtained for various  $\xi$  are shown in Fig. 2. As a unit,  $J_{\max}$  for  $\xi = 0.15$  was selected. The author thanks Candidate of Physical and Mathematical Sciences G.R. Rik for suggesting the subject and supervising work. There are 2 figures and 3 non-Soviet-bloc references. IX

ASSOCIATION: Agrofizicheskiy Institut Leningrad (Agrophysical Institute Leningrad)

SUBMITTED: April 2, 1960  
Card 6/7

20107

The electron energy spectra...

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B102/B204

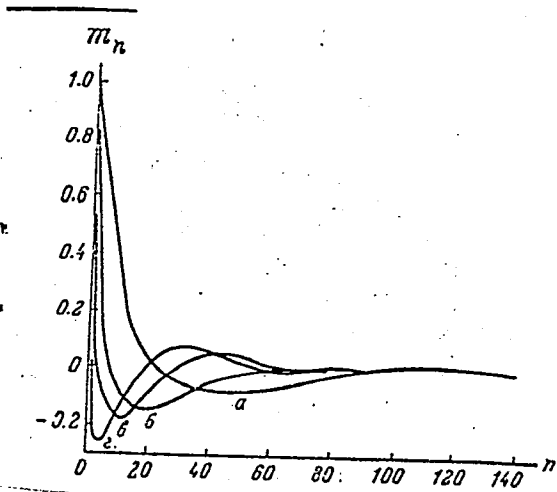


Fig. 1

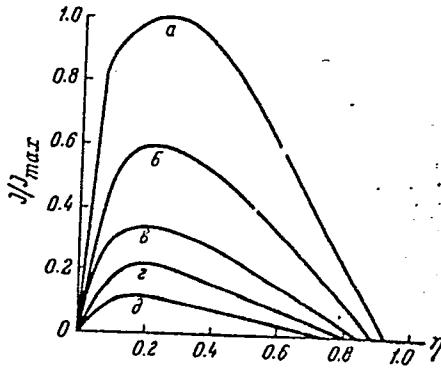


Fig. 2

Card 7/7

VOLKOV, G.A., inzh.

Determination of optimum power generation reserve in the design  
of electric power systems. Elektrichestvo no.6:37-42 Je '63.  
(MIRA 16:7)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo,  
(Electric power plants)

VOLKOV, G A. (Angren, Tashkenskoy obl.)

Power supply from the electric lighting network. Pat' i pat.khoz.  
8 no.6:40 '64. (MIRA 17:9)



SAKHNOVSKIY, K.V., doktor tekhn. nauk, prof., retsenzent; MOROZOV, A.P., red.; VOLKOV, G.F., inzh., red.; REYZ, M.B., red. izd-va; ROZOV, L.K., tekhn. red.

[Mesh-reinforced concrete elements in construction] Armo-tsementnye konstruksii v stroitel'stve; sbornik nauchnykh soobshchenii. Leningrad, Gosstroizdat, 1963. 177 p.

(MIRA 16:4)

1. Akademiya stroitel'stva i arkhitektury SSSR. Leningradskiy filial. 2. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Sakhnovskiy, Morozov).

(Precast concrete construction)

(Roofing, Concrete)

VOLKOV, G.D., prof.

A new discipline. Veterinariia 41 no.10:102-103 0 '64.  
(MIRA 18:11)

1. Moskovskaya veterinarnaya akademiya.

MOROZOV, A.P., nauchnyy red.; VOLKOV, G.F., inzh., red.; PLAKID, M.A., kand. tekhn. nauk, nauchnyy red. [deceased]; NIKOLAYEVA, N.M., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Mesh-reinforced concrete and mesh-reinforced concrete structures] Armotsement i armotsementnye konstruksii; materialy nauchnogo soveshchaniia. Moskva, Gosstroizdat, 1962. 266 p. (MIRA 16:8)

1. Nauchnoye soveshchaniye po armotsementu i armotsementnym konstruksiyam, Leningrad, 1961. 2. Leningradskiy filial Akademii stroitel'stva i arkhitektury SSSR (for Morozov, Volkov).

(Reinforced concrete construction)

S/183/60/000/02/03/000  
B004/B005AUTHOR: Volkov, I. I., Director

TITLE: Report

PERIODICAL: Khimicheskiye volokna, 1960, No. 2, pp. 6 - 9

TEXT: This report was delivered at the Branch Conference of the Synthetic Fiber Industry in Klin, December 16-18, 1959. The Klin'skiy kombinat (Klin Kombinatsiya) produces viscose fiber, cellophane foil, caprone rayon, staple fiber, bristles, and cord. The lecturer gives a survey of the measures which have led to an improvement in quality of the production as compared to 1950. First-quality production amounts to 63.5 - 68.2%. In spite of this fact, consumers are dissatisfied. The shortcomings of production are caused by bad raw materials. The Priozerskiy tsellyuloznyy kombinat (Priozersk Cellulose Kombinatsiya) supplies cellulose with a low content of  $\alpha$ -cellulose and a high ash content. The caustic soda has a high content of impurities. Dyes are delivered with a particle size of 60-80  $\mu$ . The Rubezhanskiy zavod (Rubezhnoye Works) delivers finely disperse anthraquinone-blue which, however, contains iron. The  $TiO_2$  of the Yaroslavl'skiy zavod (Yaroslavl'skiy Works) contains no particles smaller than 0.3  $\mu$ . For caprolactam, the GOST-7853-55

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Report

S/183/60/000/02/03/025  
B004/B005

standard is much too low. In spite of this fact, 24.6 - 39% of the caprolactam delivered was below this standard. Good oiling agents are missing. Nine of 13 deliveries of BV preparation by the khimicheskiy zavod im. Baturina (Chemical Factory imeni Baturin) in Ivanovo were below standard. The equipment of the factory is antiquated. The spinning pumps delivered by the Kamenskiy mashinostroitel'nyy zavod (Kamenka Machine Construction Works) have a service life of 1.5 - 4 months. The bobbins made of Getinaks by the zavod "Elektroizolit" ("Elektroizolit" Works), as well as the glass oiling discs of the zavod "Krasnyy May" ("Red May" Works) at Vyshniy Volochek, last 1 month only. The TsNIIMashdetal' (Central Scientific Research Institute of Auxiliary Articles and Span Parts for the Textile Industry) will have to find new materials for oiling discs and bobbins. The caprone fiber production could not be extended in 1959 due to the shortage of structural iron. The experimental plant for caprone fiber has to work for the current production. The following measures are suggested to improve the quality: The GIPROIV (State Institute for the Design and Planning of Synthetic Fiber Industry Establishments) is to work out a modernization scheme for the factory. The GOST standard on cellulose and caprolactam is to be improved. The Rubezhnoye Works and the Tambovskiy zavod (Tambov Works) are to deliver better eyes. The TsNIIBum (Central Scientific Research Institute of the Pulp and Paper

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Report

S/183/60/000/02/03/000  
B004/B005

Industry), the TsNIMashdetal', and the shpul'no-katushechnaya fabrika im. Dzerzhinskogo (Spool and Bobbin Factory imeni Dzerzhinskiy) are to choose better paper- and cardboard sorts. The Ministerstvo bumazhnoy promyshlennosti RSFSR (Ministry of the Paper Industry of the RSFSR) will have to fix more rigorous standards on spool cardboard. Experimental workshops and laboratories are to be established. ✓

ASSOCIATION: Klinskiy kombinat (Klin Kombinatsiya)

Card 3/3

3(8)

AUTHORS:

Germanov, A. I., Volkov, G. A.,  
Lisitsin, A. K., Serebrennikov, V. S.

SOV/7-59-3-7/13

TITLE:

Results from Investigating the Oxidation-reduction Potential  
of Subterranean Waters (Opyt izucheniya okislitel'no-  
vosstanovitel'nogo potentsiala podzemnykh vod)

PERIODICAL:

Geokhimiya, 1959, Nr 3, pp 259-265 (USSR)

ABSTRACT:

During the period from 1951 to 1957 the oxidation-reduction potential was determined more than 300 times of subterranean waters from (Soviet) Central Asia, Kazakhstan and the Caucasus. Determination was carried out by means of LP-4-, LP-5-, and P-6-type potentiometers of the "MOSKIP" plant. Samples were in most cases taken from bore-holes and more rarely from springs, and only for purposes of comparison from water-courses on the surface. Certain precautionary measures were taken when taking samples (Fig 1) in order to eliminate the influence exercised by the oxygen of the air. Besides the oxidation-reduction potential, also pH and temperature were measured, a chemical analysis was carried out, and the gas content was investigated (Table). The oxidation-reduction potential is between +550 and -480 millivolt referred to the normal hydrogen

Card 1/2

An Attempt at Investigating the Oxidation-reduction  
Potential of Subterranean Waters

SOV/7-59-3-7/13

electrode; in oxygen-containing waters it is + 300, in hydrocarbonaceous waters it is between -30 and -480 mv. The highest value of + 550 mv was found in water containing oxygen of pH 2. Water containing oxygen is found in depths of up to about 1000 m; the biochemical oxidation of organic substance may be found in even greater depths. There are 3 figures and 1 table.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva (Institute for the Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry, AS USSR Moscow)

SUBMITTED: July 18, 1958

Card 2/2



VOLKOV, G. D., Cand. of vet. sci.

Moscow Veterinary Acad.

"Pentothal narcosis."

SO: Veterinariya 27(11), 1950, p. 42

VOLKOV, G. D. *Lecturer, Moscow Vet. Acad.*

Pentothal

Experiment of using mass pentothal and thiopental narcosis for the castration of young pigs, Veterinariya 29, No. 7, 1952

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

VOLKOV, G. D.

"Pentothal and Thiopental Narcosis for Agricultural Animals and Wild Fur-Bearing Animals." Dr Vet Sci, Moscow Veterinary Academy, Min Higher Education USSR, Moscow, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

L 3895-66 EWT(m)  
AM5025574

BOOK EXPLOITATION

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577.391 (075.8)50  
B+1

Volkov, Georgiy Dmitriyevich; Lipin, Vasily Aleksandrovich; Cherkasov, Dmitriy Pavlovich

Radiobiology (Radiobiologiya), Moscow, Izd-vo "Kolos", 1964. 231 p. illus., 7,000 copies printed. Series note: Uchebniki i uchebnyye posobiya dlya vysshikh sel'skokhozyaystvennykh uchebnykh zavedeniy.

TOPIC TAGS: radiobiology, radiology, nuclear radiation, ionizing radiation, radiation biologic effect, radiation plant effect, horticulture, animal husbandry, radiation sickness, radioactive contamination, nuclear protective equipment, nuclear safety, nuclear shielding

PURPOSE AND COVERAGE: This textbook of radiobiology presents the principles of general radiology, elements of the physics of nuclear radiation, dosimetry, and radiometry of ionizing radiation. It gives an introduction to the use of ionizing radiation in cattle breeding and agriculture as well as sanitary radiometric control of objects in veterinary supervision. Also, the textbook gives an account of basic radiation safety and the organization of work with radioactive materials. This book is intended for veterinary institutes and departments.

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TABLE OF CONTENTS (abridged):

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- Ch. II. Dosimetry of nuclear radiation -- 61
- Ch. III. Sources of ionizing radiation and radioactive contamination of the surrounding environment -- 76
- Ch. IV. Principles of biological action of ionizing radiation -- 101
- Ch. V. Radiation sickness -- 140
- Ch. VI. Use of ionizing radiation in agriculture, cattle breeding and veterinary science -- 176
- Ch. VII. Sanitary-radiometric control of objects in veterinary supervision and of surroundings -- 195
- Ch. VIII. Protection of livestock from contamination by radioactive matter -- 217
- Ch. IX. Principles of radioactive safety and organization of work with radioactive matter -- 222

SUB CODE: LS, NP

SUBMITTED: 20May64

NO REF SOV: 000

OTHER: 000

Card 2/2

*beh*

VOLKOV, Georgiy Dmitriyevich.

Academic degree of Doctor of Veterinary Sciences, based on his defense, 4 February 1955 in the Council of Moscow Veterinary Academy, of his dissertation entitled: "Pentotalic and Tiopentalic Narcosis of Agricultural Animals and Furbearing Animals."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 12, 28 May 55, Byulleten' MVO SSSR, No. 15, Aug 56, Moscow, pp. 5-24, Uncl. JPRS/NY-537

VOLKOV, Georgiy Dmitriyevich; LIFIN, Vasiliy Aleksandrovich;  
CHERKASOV, Dmitriy Pavlovich; ZELEFUKIN, V.S., red.

[Radiobiology] Radiobiologia. Moskva, Kolos, 1964.  
231 p. (MIRA 17:9)

MOROZOV, A.P., nauchnyy red.; VOLKOV, G.E., inzh., nauchnyy red.;  
FLAKID, M.A., kand. tekhn. nauk, nauchnyy red. [deceased];  
NIKOLAYEVA, N.M., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Materials of the Scientific Conference on Mesh-Reinforced  
Concrete and Mesh-Reinforced Concrete Elements]Materialy Nauch-  
nogo soveshchaniya po armotseментu i armotseментnym konstruktsiyam,  
Leningrad, 1961. Moskva, Gosstroizdat, 1962. 266 p.  
(MIRA 16:1)

1. Nauchnoye soveshchaniye po armotseментu i armotseментnym kon-  
struktsiyam, Leningrad, 1961. 2. Deystvitel'nyy chlen Akademii  
stroitel'stva i arkhitektury SSSR (for Morozov). 3. Leningradskiy  
filial Akademii stroitel'stva i arkhitektury SSSR (for Morozov,  
Volkov).

(Reinforced concrete—Congresses)



VOLKOV, G.F., inzh.; LANTSOV, V.A., kand.tekhn.nauk; SHARYY, Yu.V.,  
kand.tekhn.nauk; RAYLYAN, V.F., prof., red.; ROTENBERG,  
A.S., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Comprehensive building up of city blocks with large  
buildings; practices in Leningrad] Kompleksnaya zastroyka  
kvartalov krupnoelementnymi zdaniyami; iz opyta Leningrada.  
Leningrad, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.  
materialam, 1959. 124 p. (MIRA 12:6)  
(Leningrad--Building)

VOLKOV, G.G., inzhener-mayor, kand.tekhn.nauk

Rocket plane. Vest. Vozd. Fl. no.5:86-89 My '61. (MIRA 14:8)  
(Rocket planes)

VOLKOV, G. I.

c/1963  
DECEASED

1964

AGRICULTURAL MACHINERY

VOLKOV, G.I. 10

*Ca*

Separating 1,4- and 2,4-naphthylaminedisulfonic acids. G. I. Volkov. Russ. 33,163, Nov. 30, 1933. The Na salts of these acids are recrystallized from water.

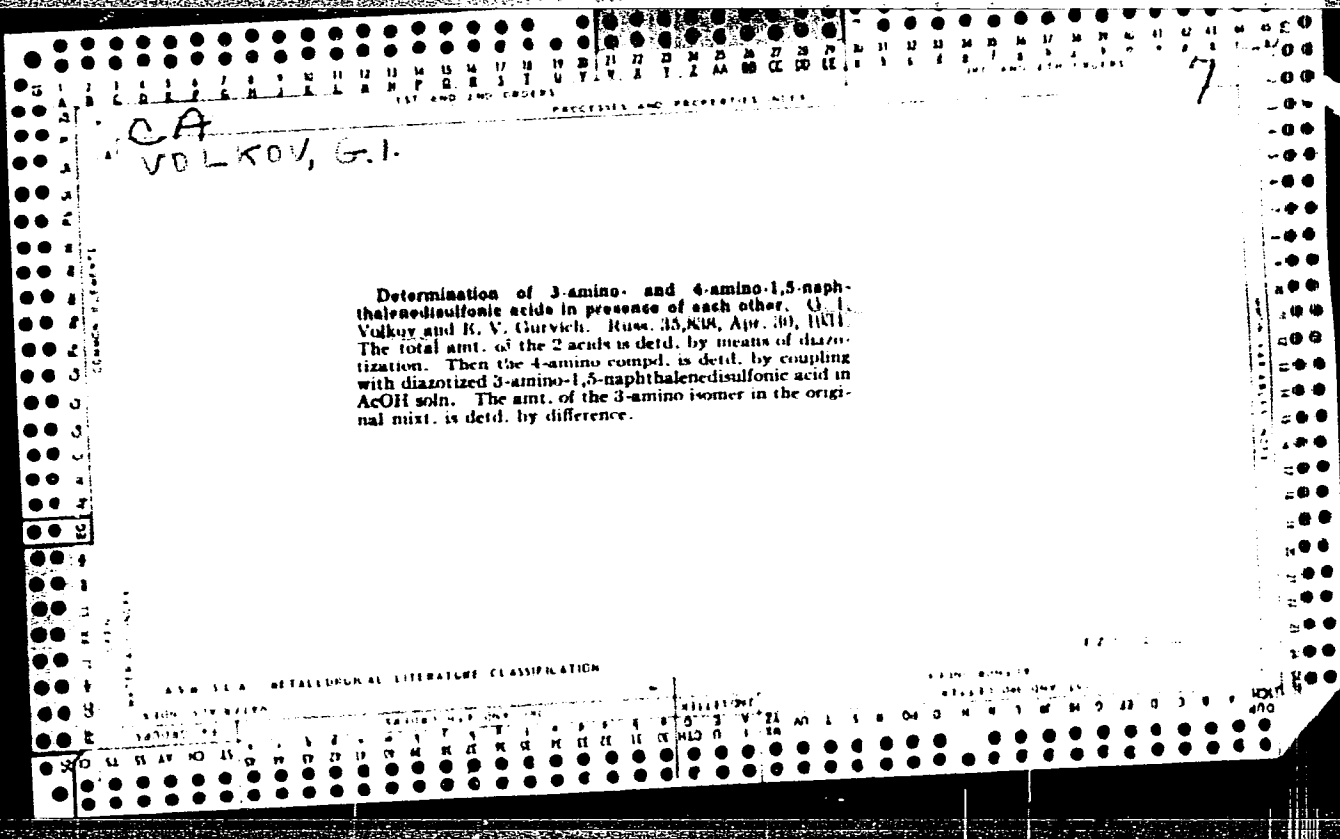
AS 4-51 A METALLURGICAL LITERATURE CLASSIFICATION

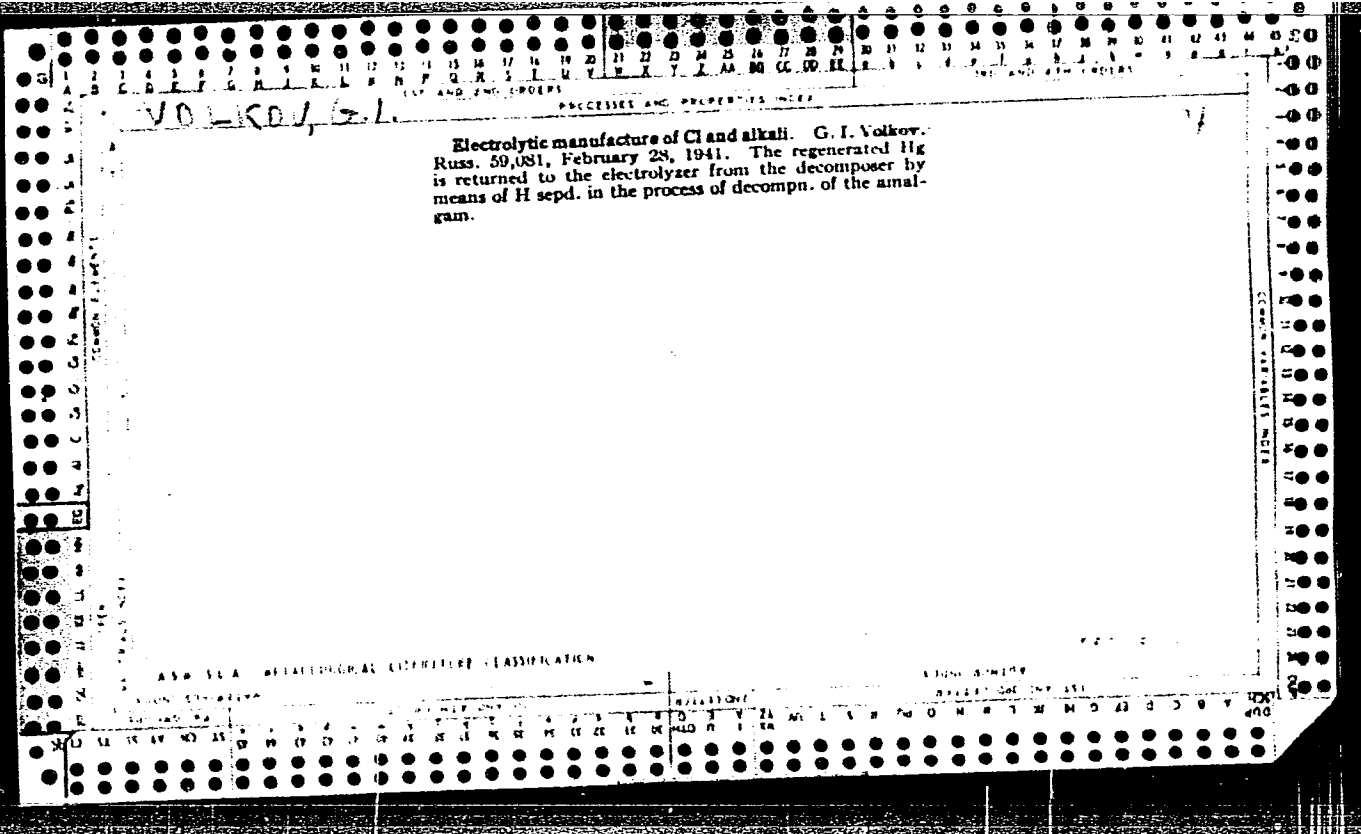
Common Elements: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Metals: AL CU FE NI SN ZN

Non-Metals: C O S

Other: H N O





VOLKOV, G.I.

9

Electrolytic production of chlorine and alkali. G. I. Volkov. U.S.S.R. 67,924, Feb. 28, 1917. Improvements in the design of app. are given. Adm. to U.S.S.R. 69,081 (C.A. 39, 874<sup>3</sup>). M. Hosh

VOLKOV, G. I.

Metallurgical Abst.  
Vol. 21 May 1954  
Electrometallurgy and Electrochemistry

*Rate of Decomposition of Sodium Amalgam in Alkaline Solutions.* G. I. Volkov and Z. L. Klitsa (*Zhur. Priklad. Khim.*, 1952, 25, (2), 154-158 (in Russian); *J. Appl. Chem. U.S.S.R.*, 1952, 25, (2), 163-167, 253 (in English).--The rate of decomp. was determined by measuring the current flowing in a short-circuited graphite/amalgam cell, by a compensation method. The alkali soln. was prepared by diluting 50% NaOH obtained by electrolysis of  $\text{NaCl}$  with a Hg cathode. Values of e.d. for a 0.1% Na amalgam in NaOH soln. (44-750 g/l) at 30°-90° C. and for 0.1% Na amalgam in soln. contg. from 40% (at 30° C.) to 91.6% NaOH (at 300° C.) are tabulated. Difficulty was experienced in obtaining reproducible results, because of the sensitivity of the graphite electrode to contamination. The results are discussed in terms of the operating conditions of amalgam-decomposing cells.--G. V. E. T.



VOLKOV, G. I.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
General and Physical Chemistry

Velocity of decomposition of sodium amalgam in alkaline  
solution. G. I. Volkov and Z. L. Klitaa. *J. Appl. Chem.*  
*U.S.S.R.* 25, 163-7 (1952) (Engl. translation).—See *C.A.* 47,  
4701b. H. L. H.

② Chem

9-2-54  
H.L.H.

VOLKOV, G. I.

Chem.

3  
①

Chem Abs 048

1-25-54

general & Physical  
Chemistry

The rate of decomposition of sodium amalgam in alkaline solutions. G. I. Volkov. *Zhur. Fiz. Khim.* 27, 194-6 (1953); cf. *C.A.* 47, 4701b. — Amalgam (contg. 0.055% Na) was placed in a satd. NaCl soln. for 11 days, and the spots that gassed strongly and all visible surface layers were removed daily. This treatment lowered the rate of soln.; the lowest rate was  $1.4 \times 10^{-4}$  cc.  $H_2$ /sq. cm. hr. (at pH 12). It corresponds to H overvoltage of 1.8 v. at c.d. of 1 amp./sq. cm. Thus, this ove voltage is greater than was hitherto believed. The overvoltage should depend on the metal in the amalgam. J. J. Bikerman

8-31-54  
JJB

Volkov, G. I.

2

Effect of compounds of different elements on the rate of  
decomposition of sodium amalgams in brine. G. I. Volkov.  
CH. J. Appl. Chem. U.S.S.R. 27, 643-5 (1954) (Engl. transla-  
tion).—See C.A. 49, 38i. B. M. R.

MB

VOLKOV, G.I.

Rate of decomposition of sodium amalgams in alkaline solutions. G. I. Volkov. *Zhur. Priklad. Khim.* 27, 681-4 (1954). ~~cf. *Zhur. Priklad. Khim.* 27, 681-4 (1954).~~ The effect of the following compds. on the rate was investigated (the figures in parentheses are the concns. (mg./l.) and the vol. (ml.) of H<sub>2</sub> generated in 30 min., resp.): CuSO<sub>4</sub> (100, 0.4); nitrates of: Ag (10, 0.15), Hg (1000, 0.2), Th (10, 0.3), U (1.0, 0.2), chlorides of: Mg (10, 0.1), Ca (10, 0.1), Sr (100, 0.1), Tl (10, 0.2), Ba (10, 0.1), Zn (100, 0.1), Cd (10, 0.1), Y (10, 0.2), La (10, 0.6), Ce (1000, 0.3), Pr (1000, 0.4), Nd (1000, 0.3), Sm (1000, 0.4), Eu (1000, 0.2), Er (1000, 0.3), Tl (10, 0.15), Zr (10, 0.15), Sn (1000, 1.3), Pb (1.0, 0.05), Bi (10, 0.1), Mn (1.0, 0.05), Fe (1.0, 0.3), Co (10, 0.1), Ni (1.0, 0.4), Ru (0.1, 0.2), Rh (0.1, 0.2), Pa (0.01, 0.1); NaH<sub>2</sub>PO<sub>4</sub> (0.7), Na<sub>2</sub>CO<sub>3</sub> (0.01-4.5), Na<sub>2</sub>arsenate (1.0, 0.1), Na<sub>2</sub>antimonate (100, 0.6), Na<sub>2</sub>CrO<sub>4</sub> (0.1, 2.5), Na<sub>2</sub>MoO<sub>4</sub> (0.1, 1.2), Na<sub>2</sub>WO<sub>4</sub> (10, 0.1), Na<sub>2</sub>FeO<sub>4</sub> (10, 0.15); K<sub>2</sub>OsCl<sub>6</sub> (0.1, 0.2); K<sub>2</sub>PtCl<sub>6</sub> (0.01, 2.2); alkali soln. of Co (0.01, 0.2); tantalic acid fused with NaHCO<sub>3</sub> (1000, 0.1); NH<sub>4</sub>Ca alum (100, 0.1); borax (1000, 0.3); AlCl<sub>3</sub> (1.0, 0.2), K<sub>2</sub>perrhenate (0.1, 0.15). I. Beacowitz

VOLKOV G.I.

VOLKOV, G. I.

<sup>18</sup> ~~Decomposition of alkali metal amalgams.~~ <sup>21</sup> ~~G. I. Volkov,~~  
~~E. A. Kolesnikov, L. L. Kuznetsov, A. G. Simon, and P. G.~~  
~~Khain, U.S.S.R. 106,252, 1955.~~ The app. for  
decompos. of the amalgams is arranged in the form of steps  
over which the amalgam flows. ~~At each step~~

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W. W. O. T.

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CIA-RDP86-00513R001860520013-5"

AUTHORS: Yakimenko, L. M., Volkov, G. I. SOV/64-56-5-15/2

TITLE: News in the Production of Chlorine and Caustic Potash  
According to the Mercury Method (Novoye v proizvodstve khloro  
i kaustika po rtutnomu metodu)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 5, pp.315 - 320 (USSR)

ABSTRACT: This paper is based on the data obtained from the Review  
of H.A.Sommers, Chem.Eng.Progr., 53, Nr 9, 409 (1957). Its  
production of a purer and cheaper product is given as the  
reason for the preferred development of the mercury method  
as opposed to the diaphragm electrolysis. The authors give  
a table of the electric indices of some tank types as well as  
a number of figures which demonstrate the type of construction  
Among the types mentioned in the tables the tanks according to  
Matiyeson, Sol've, Ude, of the BASF and the De-Nora are de-  
scribed. Various individual data as well as advantages and  
disadvantages of the tank types are mentioned and explained. I  
is found that the most effective increase of the amperage load  
of the tank is obtained by an increase of the current density.  
In plants with high output or low-voltage rectifiers it is

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News in the Production of Chlorine and Caustic Potash  
According to the Mercury Method

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useful to carry out the amperage load of the tank also at the expense of an increase in dimensions. The vertical scrubber analyzers of amalgam have no advantages over the horizontal ones. The tank constructions without passage are especially worth mentioning. Arrangements with separate shunting switches at the tanks prove to be unnecessary. The vertical tanks will have a special advantage over the horizontal tanks until it becomes possible for the approach of the electrodes according to the degree of consumption of the anodes. There are 13 figures and 4 tables.

1. Chlorine---Production
2. Potassium carbonates---Production
3. Electrolytes---Performance
4. Mercury---Applications

Card 2/2

AUTHORS: Volkov, G. I., Grinevich, V. I. SOV/78-3-2-40/48

TITLE: The Solubility of Lithium Carbonate in Lithium Chloride Solutions (Rastvorimost' uglekislogo litiya v rastvorakh khloristogo litiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1968-1969 (USSR)

ABSTRACT: The solubility of  $\text{Li}_2\text{CO}_3$  was determined in 2, 5, 10, 20, and 30 per cent lithium chloride solutions. The data of the solubility of lithium carbonate in water at 20° centigrade coincide with the data of Bewad. According to Bewad the solubility of lithium carbonate in water at 20° centigrade amounts to 3,1 g/l, at 50° centigrade to 11,7 g/l, and at 75° centigrade to 8,6 g/l. The solubility of lithium carbonate was also determined in solutions of lithium chloride at 20, 40, 60, and 80° centigrade. At 20° centigrade the solubility of 2 per cent lithium chloride solution amounts to 3,80 g/l and at 80° centigrade to 2,10 g/l, in 5 per cent lithium chloride solution at 20° centigrade to 1,36 g/l and at 80° centigrade to 0,95 g/l, in 10 per cent solution at 20° centigrade to 0,37 g/l and at 80°

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SOV/79-3-3-40/48

The Solubility of Lithium Carbonate in Lithium Chloride Solutions

centigrade to 0,24 g/l, in 20 per cent solution at 20° centigrade to 0,06 g/l and at 30° centigrade to 0,04 g/l, in 30 per cent solution at 20° centigrade to 0,03 g/l and at 30° centigrade to 0,03 g/l. There are 1 figure, 2 tables, and 1 reference, . . . which is Soviet.

SUBMITTED: January 4, 1958

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VOLKOV, G.I.; KUS'KINA, E.I.

Electrolysis experiment with cathode of mercury streaming down  
a metal surface. Zhur.prikl.khim. 31 no.11:1755-1757 N '58.

(MIRA 12:2)

(Electrodes, Mercury)

VOLKOV, G. I.

PHASE I BOOK EXPLOITATION SOV/2216

5(4)

Soveshchaniye po elektrokhemii. 4th, Moscow, 1956.

Trudy... (Izborniki) [Transactions of the Fourth Conference on Electrochemistry; Collection of Articles] Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed. Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.M. Prumkin (Resp. Ed.) Academician, O.A. Yestlin, Professor, S.I. Zhidnev (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhidnev (Resp. Secretary), B.N. Kabanov, Professor, A. M. Kolotyrkin, Doctor of Chemical Sciences, V.V. Losev, P.D. Lukorbeev, Professor, Z.A. Solov'yeva, V.V. Stender, Professor, and G.E. Pliginskich, Ed. of Publishing House! N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences, USSR, and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Kashtek, O.S., and V.V. Stender. Dnepropetrovsk Institute of Chemical Technology imeni P.E. Dzerzhinskiiy. Polarization of Graphite Electrodes During the Anodic Separation of Chlorine 833

Buravov, M. Ye., and G.A. Tsyganov (Institute of Chemistry, Academy of Sciences, USSR). Hydrogen Overvoltage at Electrodes With Homogeneous Surface 827

Rakov, A.A., K.I. Masaya, and E.V. Kasatkina (Physicochemical Institute imeni L. Ya. Karlov). Mechanism of the Simultaneous Electrochemical Formation of Persulfuric Acid, Ozone and Oxygen at a Platinum Anode in Sulfuric Acid Solutions 831

Volkov, G.I., Z. L. Klitsa, Ye. K. Susnova and N. V. Chernykh. Influence of Surface-Active Substances on the Rate of Decomposition of Sodium Amalgam 841

Il'in, G. G., and V.I. Skripchenko (Novocherkassk Polytechnic Card 33/34

Transactions of the Fourth Conference (Cont.) SOV/2216  
Institute imeni S. Ordzhonikidze). Influence of the Nature of an Electrolytic Oxidation on the Anode Process During the Electrolysis of Alkaline and Alkaline-Earth-Metal Chloride Solutions 845

Voronin, M.N. (Deceased), B. G. Prakhodchenko, A.A. Yodigaryan, G. V. Izbekova, A. G. Pavlenko, Ye. Kh. Ignatenco, and E.V. Trachuk (Kiyev Polytechnic Institute). Electrolytic Reduction of Oxygen at Porous Cathodes 849

Discussion [N. A. Fedotov, R.I. Kaganovich, G.N. Kokhanov, and contributing authors] 846

AVAILABLE: Library of Congress  
Card 34/34

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SOV/64-59-5-11/28

5(1)

AUTHORS: Volkov, G. I., Mulin, Ye. V.

TITLE: On the Thickness of Mercury Layers in Baths With a Mercury Cathode

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 5, pp 408-410 (USSR)

ABSTRACT: Extremely thin layers of Hg may be obtained in electrolyzers with wetting Hg-cathode, because thickness is not limited by surface tension. The bottom of the baths, which are in horizontal position, usually exhibits an inclination of 1.5 mm/m and the Hg-layers are 3 - 3.5 mm thick (for the addition rate of 0.1 l/min per cm width of the bath). The rise of the angle of inclination causes a reduction of the layer thickness and, in consequence, of the necessary amount of Hg. The dependence of the layer thickness on the angle of inclination of the bottom plane as well as on the flow velocity of Hg (properly speaking of a weak Na-amalgam) was investigated. The thickness of the amalgam layer was measured by means of an indicator-micrometer with 0.01 mm graduation of scale. Measurements were made in such way that an alternating current circuit closed by the contact of the indicator-micrometer pin with the amalgam; this was recorded

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On the Thickness of Mercury Layers in Baths With a Mercury Cathode

by a voltmeter. The method of measurement was checked in a steel beaker by measuring the increase of the Hg-layer thickness, occurring with the addition of weighed Hg amounts, in fixed position of the indicator-micrometer. Subject of measurement was a steel plate (30 mm wide, 300 mm long, with a raised edge laterally), its angle of inclination was varied by a hinged mounting and was measured by means of a goniometer. The amount of the amalgam, flowing over the steel plate per unit of time, was determined by means of a flowmeter as well as by weighing the amount of amalgam flowing off from the steel plate. The applied steel plates consisted of already used bottoms of electrolyzers as well as of highly polished steel plates. As may be seen from the diagrams obtained (Figs 1,2) the thickness of layer depends on the angle of inclination and on the amount of amalgam flowing by. The diagrams plotted in the coordinates thickness of layer - angle of inclination (Figs 3,4) show, that already with a small increase of the angle of inclination the thickness of layer and the necessary Hg-amount decreases. There are 4 figures.

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5(4)

307/69-21-4-7/22

AUTHOR: Volkov, G.I. and Gusakova, D.Ya. (Moscow)

TITLE: Concerning Amalgam Foams

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4. pp 413-414 (USSR)

ABSTRACT: The authors report on experiments made to ascertain the cause of the foaming of sodium amalgam taking place at times on its contact with aqueous solutions. The effect of the addition of iron, copper, zinc, cobalt, barium, manganese, tin, vanadium, tungsten, molybdenum, cadmium, palladium, titanium, arsenic, tellurium, germanium, antimony, lead, nickel and chromium to the solution was investigated. Amalgam foam was found to form spontaneously on contact of sodium amalgam with an aqueous solution containing 0.2 mg/l chromium salt as referred to the metal. There are 4 references, 2 of which are Soviet and 2 German.

SUBMITTED: 4 November, 1957  
Card 1/1



VOLKOV, G.I.; GRINEVICH, V.A.

Speeding up the decomposition of sodium amalgam. Khim.prom. no.1:  
58-59 Ja-F '60. (MIRA 13:7)  
(Amalgam)

VOLKOV, G.I., IZosenkov, R.I.

Effect of calcium ions on the operation of a chlorine electrolyzer  
with a mercury cathode. Khim. prom. no. 7:562-564 Q-N '60.  
(MIRA 13:12)

(Electrolysis)

(Calcium)

CHEREMISINA, N.V.; VOLKOV, G.I.; KHOMYAKOV, V.G.

Decomposition of sodium amalgam in a short-circuited galvanic  
element. Zhur.prikl.khim. 34 no.10:2268-2275 0 '61. (MIRA 14:11)  
(Amalgams) (Electrochemistry)

KORNEYEV, N. N.; POPOV, A. F.; ZHIGACH, A. F.; VOLKOV, G. I.

Synthesis of diethyl aluminum chloride via triethyl aluminum  
sesquichloride. Khim. prom. no.3:178-180 Mr '63,  
(MIRA 16:4)

(Aluminum compounds) (Aluminum chloride)