

ACC NR: SS-2/EWT(1)/EEC(k)-2,ETS(f)/EPF(n)-2/EWG(m)/T/EWP(t)/EWA(h) LP(a)  
 AP6002234 DS/JD/T/NN/AT SOURCE CODE: PO/0095/65/013/010/0547/0552

AUTHOR: Wartanowicz, T. - Vartanovich, T.

ORG: Institute of Heat Engineering, Technical University, Warsaw (Instytut Techniki Ciepłej, Politechnika)

TITLE: Analysis of performance and experimental investigations on a molten salt thermocell as a thermoelectrochemical energy converter

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques, v. 13, no. 10, 1965, 547-552

TOPIC TAGS: heat energy conversion, thermal battery, fuel cell

ABSTRACT: This paper makes a theoretical analysis of a thermocell as a thermoelectrochemical energy converter from the viewpoint of its energy properties. Experimental investigations performed attempted to verify the basic conclusions derived from the theoretical analysis of work of a molten salt thermocell. A model of the thermocell with molten AgNO<sub>3</sub> as the thermoelectric material was constructed. Two main conclusions obtained were: 1) the difference in the temperatures and the figure of merit of molten salt are of major importance for the energy properties of a thermocell, and 2) the experimental investigations verified the basic assumptions and the results of theoretical analysis of the performance of a molten salt thermocell. It is suggested that further investigation be

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L 15797-66

ACC NR: AP6002234

conducted in the following directions: a) the classical applications of a thermocell as a converter of heat into electric energy; b) the practical use of the electrode reaction in a thermocell to the electrolytic purification of metals; and c) the application of the electrochemical phenomena of a thermocell to the evaluation of the thermoelectrolytic corrosion in chemical reactors (nonuniformly heated) of various types. This paper was presented by B. Stefanowski 6 July 65. Orig. art. has: 5 figures and 14 formulas. [08]

SUB CODE: 10/ SUBM DATE: none/ OTH REF: 005 / ATD PRESS: 4201

Card 2/2 *MGS*

VARTANYAN, A.

Toward new achievements in the building of communism. Prom.  
Arm. 4 no.9:3-5 S '61. (MIRA 14:11)  
(Armenia--Economic policy)

SARUKHANYAN, V.O.; DZHANDZHUGAZYAN, A.G.; MURADYAN, K.M.; VARTANYAN, A.

Potentiated anesthesia. Trudy Erev.med.inst. no.11:341-346 '60.  
(MIRA 15:11)

1. Iz kafedry khirurgicheskogo sanitarno-gigiyenicheskogo fakul'teta  
(zav. kafedroy - prof. V.O.Sarukhanyan) Yerevanskogo meditsinskogo  
instituta.

(ANESTHESIA)

VARTANIAN, A. AND ARMENIAN, B.,

'Prevent the illness of livestock with foot and mouth disease.'  
Yerevan, 1952. 8 pages, free, 1,000 copies.  
SO: Veterinariya; 25(5). May 1953  
30

USSR/Microbiology. Hemoglobinophilic Bacteria  
Microbes of Tularemia

F-5

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 62436

Author : Vartanyan A., Yesadzhanyan M.

Inst : -

Title : On Sheep Sick with Tularemia and on the Resistance of the Microbes Contained in their Meat.

Orig Pub : Arokhchapautyun, 1956, No 2, 23-25

Abstract : No abstract

Card : 1/1

Vartanyan A. A.

MIROSHNICHENKO, M. A.,

VARTANYAN, A. A., DVBANYAN, /

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710010-0

APPROVED FOR RELEASE: 08/31/2001

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12/14

VARTANYAN, A.A.

Rapid methods of hydraulic tunnel construction. Trudy ~~MI~~ no.29:  
51-72 '57. (MIRA 13:3)

(Tunneling)

VARTANYAN, A. A

~~VARTANYAN, A.A.~~ <sup>g</sup> Cand Tech Sci—(di-s)  
 "Speed methods of construction of ~~hydraulic~~ <sup>hydraulic</sup> engineering tunnels upon  
 cutting through rocky grounds." Mos, 1958. 24 pp (Min of Higher  
 Education USSR. Mos Order of Lenin Power Engineering Inst. Chair  
 of Production ~~of works~~ <sup>the performance of operations for</sup> on the ~~construction~~ <sup>Building</sup> of ~~Hydro~~ <sup>Hydraulic</sup> Constructions);  
 100 copies (KL,25-58, 112)

MOSTKOV, V.M., kand.tekhn.nauk; VARTANYAN, A.A.

New method of tunneling in weak and fractured rocks. Trudy Nauch.-issl.  
sekt.Mosk.fil.Inst."Orgenergostroi" no.3:54-56 '59. (MIRA 14:7)  
(Tunneling)

VARTANYAN, A. B., RASSADIN, L. H.

Looms

Application of a reserve shuttle on automatic looms., Tekst. prom., No. 1, 1951.

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

1. BOGDANOVA, A. V.; VARTANYAN, A. B.; PROKOP'YEVA, L. N.
2. USSR (600)
4. Cotton Spinning
7. Using cotton waste in spinning.  
Tekst. prom 12 no. 10, 1952

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

VARTANYAN, A.B., kandidat tekhnicheskikh nauk.

Determining the production capacity of enterprises. Tekst.prom.  
17 no.1:61-62 Ja '57. (MLRA 10:2)  
(Textile industry) (Textile machinery)

VARTANYAN, A.B.; PUSHKINA, I.P.; MAGNITSKIY, A.A., retsenzent;  
ORLOVA, L.A., red.; KNAKNIN, M.T., tekhn.red.

[Organizing the labor of workers operating sliver lapping machines in cotton spinning] Organizatsiia truda rabotnits, obalushivalushchikh lentsoedinitel'nye mashiny khlopko-priadil'nogo proizvodstva. Moskva, Gos.nauchno-tekhn.isd-vo lit-ry po legkoi promyshl., 1959. 26 p. (MIRA 12:6)  
(Cotton spinning)

VARTANYAN, A.B.

Classification of workers in cotton factories. *Izv.vys.ucheb.*  
zav.; tekhn.tekst.prom. no.2:11-13 '63. (MIRA 16:6)

1. Ivanovskiy nauchno-issledovatel'skiy institut khlopchato-  
bumazhnoy promyshlennosti.  
(Textile workers) (Cotton manufacture)



VARTANYAN, A.B., kand.tekhn.nauk

Motion pictures at the service of the scientific organization  
of work. Tekst.prom. 25 no.11:4-6 N '65.

(MIRA 18:12)

1. Ivanovskiy nauchno-issledovatel'skiy tekstil'nyy institut.

ASTVATSATRYAN, Z.A.; TEMIROVA, M.F.; VARTANYAN, A.K.

A new background plant for bouquets. Izv.AN Arm.SSR.Biol.i sel'khoz.  
nauki 6 no.3:35-41 '53. (MLRA 9:8)

1. Botanicheskiy institut Akademii nauk Arm.SSR,  
(ERIVAN--BRASSICACEAE) (FLOWERS--ARRANGEMENT)

SOV/136-58-5-6/22

AUTHORS: Averkhenkov, D.O., ~~Vartanyan, A.M.~~, Kopchenko, D.S.

TITLE: Introduction of Electrothermy at the Ust'-Kamenogorsk Lead-zinc Combine (Vnedreniye elektrotermii na Ust'-Kamenogorskome svintsovo-tsinkovom kombinat)

PERIODICAL: Tsvetnyye Metally, 1958<sup>3/4</sup>, Nr 5, pp 35 - 38 (USSR)

ABSTRACT: The authors discuss a recent article by V.N. Kostin in Tsvetnyye Metally, 1958, Nr 1, in which the greater application of electrothermic methods in lead and zinc production is mentioned. They list some disadvantages of shaft-furnace smelting and state the importance of developing new methods for Soviet lead-smelting works, a favourable factor being the increasing availability of cheap hydroelectric power. Electric heating of settlers was substituted for oil heating at the Ust'-Kamenogorsk Lead-zinc Combine in 1953 without altering dimensions (length, width and depth - 7 100, 2 960 and 660 mm, respectively), but experience and joint work by works and VNIItsvetmet personnel led to reconstruction with the volume reduced from 13 to 8 m<sup>3</sup>. After listing conditions for successful operation of such stationary settlers, the authors describe

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Introduction of Electrothermy at the Ust'-Kamenogorsk Lead-zinc Combine

the smelting of silver-containing dross in an electric furnace under an artificial slag layer (30%  $\text{Na}_2\text{O}$ , 30%  $\text{CaO}$ , 40%  $\text{SiO}_2$ ): tabulated compositions show that this method gives a higher recovery of noble metals into the silver-lead than with retort distillation. This work was also carried out by the same organisations and the collaborator is continuing to improve the method and to convert the 150-ton refining kettles to electric heating. The authors outline the present electric kettle-heating method with nichrome strip resistance heaters and urge the development of induction heating for higher efficiency. They agree with Kostin on the need for special design staffs in existing institutes with proper equipment for the rapid development of electrothermic methods. They do not agree with his suggested scheme for converting the Ust'-Kamenogorsk Lead Works to electric smelting as data are lacking; they would prefer the Giprotsvetmet to design a new, separate works. They urge the rapid completion

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SOV/136-58--5-6/22  
Introduction of Electrothermy at the Ust'-Kamenogorsk Lead-zinc  
Combine

of full-scale trials at the Leninogorsk Lead Works of  
electrothermic processes.  
There are 1 table and 1 Soviet reference.

ASSOCIATION: UKSTsK (Ust'-Kamenogorsk Lead-zinc Combine)

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1. Metallurgy---USSR 2. Zinc ores---Processing 3. Lead ores--  
Processing 4. Electric furnaces---Applications 5. Metals  
---Separation

SOV/136-59-5-9/21

**AUTHORS:** Vartanyan, A.M., and Kopchenko, D.S.

**TITLE:** The Experimental Use of Oxygen in Lead Smelting Shaft Furnaces (Opyt primeneniya kisloroda pri shakhtnoy svintsovoy plavke)

**PERIODICAL:** Tsvetnyye metally, 1959, Nr 5, pp 46-49 (USSR)

**ABSTRACT:** The results of using oxygen-enriched air in shaft furnaces on the Ust-Kamenogorsk Lead-Zinc Kombinat are given. Fig 1 shows the high-power oxygen plant. Oxygen is fed from a gas holder to the air-blast plant, under pressure. Individual pipes with automatically controlled valves, which can regulate the oxygen content, feed the enriched air to the shaft furnaces. Fig 2 shows the influence of oxygen content on production using a constant blast volume -  $34 \text{ m}^3/\text{m}^2$ . An increase in O content to 26.5% leads to a 27% increase in production. Fig 3 shows the influence of O content on the volume of blast required to maintain constant production. Increase in O content to 26.5% gives a decrease in enriched air volume of 34% with a corresponding decrease in volume of exhaust gases. The mean temperature of the "goose neck" on the air blast in

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The Experimental Use of Oxygen in Lead Smelting Shaft Furnaces

April 1958 was 286 °C (reaching 600-800° on individual days). Using an enriched air mixture the temperature (in November 1958) was 120-130° and for long periods was only 60-80°. The use of enriched air also results in a decrease in dust content of exhaust gases from 2-2.5 to 1.5-1.7 g/hm<sup>3</sup>. There is a decrease in coke consumption of 13.4% due to an increase in efficiency. In the first four months of 1958 the Pb content of the slag was 2.05%. After using enriched air, the Pb content fell to 1.21% (in November 1958). Because of this decrease and the decrease in dust content of exhaust gases, there was an increase in production of crude lead of 1%. Thus, considering the increase in production, the decrease in coke consumption and the decrease in the Pb lost in the slag and the gases, the economic effect is over 5 million roubles per year. The better working conditions also

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SOV/136-59-5-9/21

The Experimental Use of Oxygen in Lead Smelting Shaft Furnaces

led to a decrease in the chance of lead poisoning.  
There are 3 figures and 1 Soviet reference.

ASSOCIATION: UKSTsK

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S/136/60/000/02/002/022  
E193/E483

AUTHOR: Vartanyan, A.M., Director

TITLE: First Step in the Great 7-Year Period

PERIODICAL: Tsvetnyye metally. 1960. Nr 2, pp 7-9 (USSR)

ABSTRACT: The author of the present article discusses the progress made in 1955 at the Ust'-Kamenogorsk Combine towards the fulfilment of the latest 7-year plan. In spite of the fact that a shorter (6 to 7 h) working day was introduced at the plans of the Combine on the 1st March, 1959, the plan for the first year of the 7-year period has been over-fulfilled by thousands of tons of metal produced (or in monetary terms, by 26 million roubles) and the targets set for reducing the production costs, improving the quality and the quantity of produced metals, reducing the consumption of auxiliary raw materials and electrical energy and increasing the productivity of labour, have all been reached. This success is attributable, in the first place, to the devoted and disciplined effort of all the employees of the Combine who, for the second year running, retained in their hands the Red Trophy of the Council of Ministers of the (Kazakhstan) Republic. Owing to high degree of

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S/136/60/000/02/002/022  
E193/E483

First Step in the Great 7-Year Period

mechanization, introduction of new production methods and rationalization of work, the productivity per man at the Ust-Kamenogorsk Combine is more than twice higher than at any similar industrial undertaking in the Soviet Union. In 1959, for the first time in the history of lead metallurgy, oxygen-enriched blast was used in the blast furnace smelting of lead at the Combine; as a result, the quantity of charge smelted per 1 m<sup>2</sup> of the furnace cross-section area (at the tuyeres level) was increased by 20 to 25% and the consumption of coke reduced by 15 to 20%; the newly introduced smelting schedule brought about a 10 to 15% increase in the degree of recovery of lead, equivalent to 1 to 1.5% increase in the quantity produced; this measure alone gave an annual saving of 10 million roubles. The second successful innovation was the construction of a plan for treating slags produced during smelting of lead; it has been found that slags, accumulated at a few only plants in Kazakhstan, contain more than 800000 t of non-ferrous metals, in concentration which in some cases (particularly in the case of zinc) exceeds the

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S/136/60/000/02/002/022  
E193/E483

First Step in the Great 7-Year Period

concentration of this metal in the as-mined ore; the value of zinc and lead extracted from these slags in 1959 exceeded 7.5 million roubles. Other processes, developed and successfully applied in production, include: electrothermal treatment of silver drosses; new method of purification of zinc solutions; aero-separation of clinker before leaching; sulphatizing treatment of lead dusts etc. More than 1000 suggestions have been received; of these, 600 were successful and gave an annual saving of 6 million roubles. Several processes, including melting and casting of electrolytic zinc, have been completely mechanized and the basic technical parameters of the production processes are automatically controlled at 2500 points; full automation is being introduced in several shops (dust collection, sulphuric acid and roasting shops). Introduction of new processes and new complex equipment requires continuous training of the personnel; more than 2500 operatives and technicians attend evening classes organized by various educational establishments or take correspondence courses.

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S/136/60/000/02/002/022  
E193/E483

First Step in the Great 7-Year Period

At a recent general meeting of the employees of the Combine, the following targets were set for the year 1960: to exceed the output of zinc and lead planned for the third year of the 7-year period; to exceed the output of sulphuric acid planned for 1963; to reach the output of cadmium planned for 1965; to over-fulfil the overall plan by 15 million roubles by lowering the cost of production and introducing new production methods.

ASSOCIATION: Ust'-Kamenogorskogo svintsovo-tsinkovogo kombinata  
(Ust'Kamenogorsk Lead-Zinc Combine)

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1521 1087 1454

29424

S/081/61/000/017/073/166  
B101/B102

AUTHORS: Tsyb, P. P., Getskin, L. S., Vartanyan, A. M., Fel'dman, V. G., Anosova, T. V., Akyzbekov, A. A., Levina, A. A., Chepik, M. N.

TITLE: Extraction of indium from dusts of lead plants

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 329, abstract 17K150 (Sb. nauch. tr. Vses. n.-i. gornometallurg. in-tsvetn. met., no. 6, 1960, 377-388)

TEXT: Indium-containing dusts of lead plants are granulated with strong  $H_2SO_4$ , and the resulting granules are thermally treated in a pseudoliquid layer in a furnace at 300-350°C in order to sublimate most of the As. The hydrates, including that of indium, are precipitated by adding ZnO to the sulfuric acid solution. Subsequently, As is washed out with 10% NaOH, and the residue is dissolved in  $H_2SO_4$  in order to remove Pb. Cu is

removed from the solution by cementation with cast-iron filings, after which In is precipitated with NaOH solution. The resulting concentrate,

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S/081/41/000/017/073/166

B101/B102

Extraction of indium from ...

which contains 2-8% of In, is again dissolved in  $H_2SO_4$ , As and Sb are cemented with cast-iron filings, In is again precipitated with NaOH solution, and the precipitate is dissolved in HCl. From this solution, In is cemented on Al plates. The resulting sponge is treated with dilute  $H_2SO_4$ , from which indium is precipitated by neutralizing with  $NH_3$ . The resulting indium hydroxide is dissolved in HCl, and indium is again cemented on Al plates. Thus, a raw product with 97-98% of In is obtained, which is purified by dissolution in Hg and by electrolysis of the amalgam. About 60% of In is thus extracted from the initial dust. Cu, Te, Tl, Cd, and Pb are also obtained when the dust is processed. [Abstracter's note: Complete translation.]

Card 2/2

VARTANYAN, A.M.; SAVRAYEV, V.P.; GETSKIN, L.S.; POIULYAKH, V.I.

Recovery of selenium and arsenic from gases formed in the  
sulfatization of lead flue dupts. TSvet. met. 34 no. 4:21-25  
Ap '61. (MIRA 14:4)  
(Fly ash) (Nonferrous metals--Metallurgy)

VARTANYAN, A.M.

In the V.I.Lenin Lead and Zinc Combine in Ust'-Kamenogorsk.  
TSvet.met. 34 no.10:10-12 0 '61. (MIRA 14:10)

1. Direktor Ust'-Kamenogorskogo svintsovo-tsinkovogo kombinata imeni  
V.I.Lenina.  
(Ust'-Kamenogorsk—Nonferrous metal industries)



VARTANYAN, A.M.; PONOMAREV, V.D.; TSEREKOV, T.Kh.

Industrial use of oxygen-enriched air for the fluidized bed  
roasting of zinc sulfide concentrates at the V.I.Lenin Lead-Zinc  
Combine in Ust'-Kamenogorsk. TSvet.met. 35 no.8:21-26 Ag '62.  
(Ust'-Kamenogorsk--Zinc--Metallurgy)  
(Oxygen--Industrial applications)

VARTANYAN, A.M.

V.I.Lenin Lead and Zinc Combine in Ust' Kamenogorsk on the 45th anniversary of the Great October Socialist Revolution. TSvet. met. 35 no.11:10-14 N '62. (MIRA 15:11)  
(Ust'-Kamenogorsk--Nonferrous metal industries)

VARTANYAN, A.M.; PONOMAREV, V.D.; TSEREKOV, T.Kh.; LAYKIN, A.Ya.

Roasting of zinc sulfide concentrates using an air-oxygen blow  
in a fluidized bed furnace at the V.I.Lenin Lead and Zinc Combine  
in Ust'-Kamenogorsk. TSvet. met. 35 no.11:43-48 N '62.

(MIRA 15:11)

(Ust'-Kamenogorsk--Zinc--Metallurgy)  
(Oxygen--Industrial applications)

NOVOSELOV, S.S.; VARTANYAN, A.M.; KISHKAREV, V.A.; AVERCHENKOV, D.O.;  
SIDOROVSKIY, V.A.

Pilot plant testing methods of removing copper from ~~crude~~ lead  
with transfer of the ~~copper~~ into matte. TSvet. met. 35 no.5:  
25-31 My '62. (MIRA 16:5)  
(Lead--Metallurgy) (Copper--Metallurgy)

VARTANYAN, A.M., laureat Leninskoy premii

Role of oxygen in the metallurgy of nonferrous metals. IUn.  
tekh. 7 no.8:52-54 Ag. '63. (MIRA 16:10)

ALEKSANDROV, R.G.; BARBASHINA, Ye.G.; BAS'KO, K.P.; VARTAN'YAN, A.S.; VASILEV-  
SKIY, P.F.; GLAGOLEVA, L.A.; DUBININ, N.P., prof., doktor tekhn. nauk;  
KONSTANTINOV, L.S.; KOROTKOV, A.I.; LESNICHENKO, V.L.; PANFILOV, Ye.A.;  
TRUBITSYN, N.A.; TUCHKEVICH, N.M.; FADEYEV, A.D.; FOKIN, G.F.; MARTEHS,  
S.L., inzh., red.; SOKOLOVA, T.F., tekhn. red.

[Steel casting; foundrymen's handbook] Stal'noe lit'e; spravochnik  
dlia masterov lit'einogo proizvodstva. Moskva, Gos. nauchno-tekhn. izd-  
vo mashinostroit. lit-ry, 1961. 887 p. (MIRA 14:8)  
(Founding)

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ACC NR: AP6024398

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curves of the photo-emf were very similar to the spectra of the action of the electro-chemical photopotential arising in solid pigment layers immersed in electrolytes. These results lead to the conclusion that the observed emf is of other than barrier-layer origin, and represents one of the modifications of the photovoltaic effect, like the emf arising during longitudinal illumination. The paper was presented by Academician Terenin, A. N., 4 Nov 65. Orig. art. has: 2 figures and 1 table. [27]

SUB CODE: <sup>11,20/</sup>~~67~~ SUBM DATE: 28Oct65/ ORIG REF: 006/ ATD PRESS: 5053

Card 2/29d

L 09354-67

ACC NR: AK023203

SOURCE CODE: UR/0020/66/168/006/1287/1290

AUTHOR: Vartanyan, A. T.

ORG: none

TITLE: Photoconducting properties of bilirubin

SOURCE: AN SSSR. Doklady, v. 168, no. 6, 1966, 1287-1290

TOPIC TAGS: photoconductivity, semiconducting film, organic semiconductor, vinyl compound, oxygen

ABSTRACT: Although bilirubin is one of the most important compounds in medicine, its photoconducting properties have not been investigated before. A bilirubin layer was placed between two platinum electrodes deposited 0.5 mm apart on the surface of a quartz test tube provided with a ground seal for connection to a high vacuum installation ( $10^{-5}$  mm Hg). The layers were obtained either by depositing the pigment from a chloroform solution (thin layers, several times ten millimicrons) or by rubbing (thick layers, several hundred millimicrons). The conductivity of the layer was measured in different degrees of vacuum and in oxygen at different pressures. From the variation of the conductivity it is deduced that the oxygen becomes localized on double bonds of vinyl groups of the bilirubin molecule. Exposure to monochromatic light in the absorption band causes the resistance of the layer in the vacuum to decrease by several orders of magnitude. The photocurrent has practically no time lag and obeys Ohm's law in fields up to  $10^4$  v/cm. The dependence of the photocurrent on the illu-

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UDC: 535.215



L 09354-67

ACC NR: AP6023203

mination intensity is of the form  $i = aL^n$ , where  $n$  ranges from 0.9 - 1.0 and  $n = 1$  for low illumination levels. The temperature dependence of the photoconductivity is exponential. The spectral distribution of the photosensitivity depends on the thickness of the layer and indicates, together with the other results, that a well prepared bilirubin layer is an intrinsic photoconductor having much in common with the properties of other natural pigments. This report was presented by Academician A. N. Terenin 18 October 1965. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20// SUBM DATE: 020ct65/ ORIG REF: 010/ OTH REF: 001

Card

24398

VARTANYAN, A. V. Dva sluchaya bolezni Kheniga.-V ogl: A. M. Vartanyan. Sbornik nauch. Trudov (Ierevansk. nauch.-issled. III-T optopedii i vosstanovit. Khirurgii), 1, 1949, S. 128-30.

SO: Letopis, No. 32, 1949.

VARTANYAN, A.V., kapitan meditsinskoy sluzhby

Treating concealed diaphysial femur fractures by interosseous  
fixation. Voen.-med.zhur. no.7:86 J1 '56. (MLRA 9:11)  
(FEMUR—FRACTURE)

VARTANIAN, A.V. (Armenian, Alyevskaya St. d. 2, kv. 20)

Osteosynthesis with a metal nail in bilateral fracture of the humeri  
Vestn. Kir. 73 no. 4:91-92 Apr 1971. (MUSKUS 1)  
(MUSKUS, fractures,  
intramedullary nail(s); (Mus))

V. A. R. I. A. N. Y. A. M. A. U.

A. V. Vartanyan. Causes of the Medical Service -- The Causes and Prophylaxis of Traumatism in Artillery Units.

In the study of traumatism in artillery units special attention was directed to the examination and interrogation of the patients, the examination and study of the places where exercises were performed, of physical culture squares and equipment, of artillery workshops, garages, and artillery parks.

Two hundred and sixty-seven cases of traumata were recorded; of these the causes were determined in 250 (93.6 percent). The greatest number of cases of traumata in the artillery units was associated with regular work -- 52.6 percent. In second place were traumata associated with physical training; and then came ordinary domestic traumata and, finally, traumata associated with battle training.

So-called "artillery traumata" constituted the smallest number of cases -- 6.8 percent. The most frequent types of traumata were contusions, sprains and wounds, constituting 81.2 percent of all traumata. Bone fractures constituted 12.0 percent; burns, 4.9 percent; abrasions, 1.9 percent; traumata of the lower extremities, 1.9 percent; of the upper extremities, 34.9 percent; of the head, 13.8 percent; and of the trunk, 9.4 percent. Among the most frequent in the traumata were observed in 17 persons, artillery fractures and sprains in two. The greatest number of cases of traumata -- injuries of the feet, ankle and leg -- was noted from rolling out the weapons for rolling them into the artillery park.

The main factors in prophylaxis and in reducing the number of cases of traumata associated with battle training are a constant and persistent study of the techniques and degrees of training of the personnel and knowledge of the rules of safety technique.

Yovemo-Meditatsionny Zhurnal, No 9, 1959.

VARTANYAN, A.V., aspirant

Modern design of electric belt conveyor drums. Nauch. trudy  
Mosk. inst. radioelek. i gor. elektromekh. no. 49 pt. 2:  
137-145 ' 64 (MIRA 19:1)

L 22673-66 EWT(1)/EWT(m)/EPF(n)-2/T/EMP(t)/EMP(k)/ETC(m)-6 JD  
ACC NR: AP6006191 SOURCE CODE: UR/0377/65/000/004/0005/0010

AUTHORS: Vartanyan, A. V.; Shermazanyan, Ya. T. (Candidate of technical sciences)

ORG: Armenian Basic Laboratory, All-Union Scientific Research Institute for Current Sources (Armyanskaya bazovaya laboratoriya, Vsesoyuznogo n.-i. instituta istochnikov toka)

TITLE: Investigation of <sup>21,74,55</sup>heat flow control systems in constant-power solar furnaces <sup>46</sup><sub>B</sub>

SOURCE: Celiotekhnika, no. 4, 1965, 5-10

TOPIC TAGS: solar furnace, temperature distribution, temperature stabilization, solar radiation intensity, power optimization

ABSTRACT: The governing parameters behind a power-regulation method for a constant-strength solar furnace are discussed. The power regulation is defined by the equation  $P_{reg} = A \cdot P_{max} = const$ , where  $A = c \cdot k = const$ . The technique consists of defining  $c$  as a function of  $k$ . To this end, it is assumed that the sun can be represented as a point-radiation source, the parabolic concentrator has an idealized geometry and receives parallel beams of radiation with constant density. Three types of regulators are analyzed: a screen type regulator placed perpendicularly to  
Card 1/3 2

L 22673-66

ACC NR: AF5006191

the concentrator axis which yields, for the parameter  $\Lambda$ ,

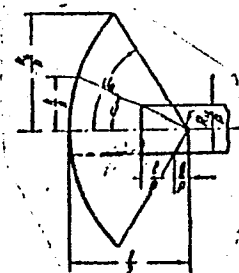
$$A = (1 - \cos \alpha) \cdot k;$$

a cylindrical type regulator which screens the external part of the reflected radiant flux, and which gives

$$A = \frac{\operatorname{arctg} \frac{\frac{R_n}{p}}{\frac{l}{p} + \frac{R_n}{p} \cdot \frac{1}{\operatorname{tg} u_0}}}{\operatorname{tg}^2 \frac{u_0}{2}} \cdot k;$$

where the various nomenclature are defined in Fig. 1;

Fig. 1. Schematic of a cylindrical regulator screening the external part of the radiant flux from the concentrator.



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L 22673-66

ACC NR: AP6006191

a cylindrical type regulator which screens the internal part of the reflected flux.  
This latter one yields the equation

$$A = \left[ 1 - \frac{\operatorname{arctg} \frac{1}{2} \left[ 1 - \left( \frac{R_a}{p} \right)^2 \right] - \frac{l}{p}}{\operatorname{arctg} \frac{R_a}{p}} \right] \cdot k.$$

Orig. art. has: 23 equations and 8 figures.

SUB CODE: 20/ SUBM DATE: 21Jun65/ ORIG REF: 001/ OTH REF: 001

Card 3/3 *HW*

VARTANYAN, G.

Method for remote and automatic control of the water level in canals. Mor.1  
rech.flot 13 no.7:19-21 N '53. (MIRA 6:11)  
(Canals) (Remote control) (Automatic control)

VARTANYAN, G.

Universal unit for automatic regulation of humidity and of the  
concentration of acid and salt medium. Prom.Arm. 4 no.2:33-35  
F '61.

(MIRA 14:6)

(Electronic instruments)

VARTANYAN, G., inzh.

Use of electronic and semiconductor apparatus in agriculture.  
Prom. Arm. 4 no. 4: 24-26 Ap '61. (MIRA 14:6)  
(Electricity in agriculture)  
(Electronic measurements)

VARTANYAN, G.A., Cand Med Sci —(diss) "A comparative physiological analysis of the effect of bromine, caffeine, and alcohol <sup>up</sup> on ~~the~~ <sup>intel</sup> conditioned reflex activity." Len, 1958. 17 pp (Inst of Experimental Med of the Acad Med Sci USSR. First Leningrad Med Inst in Acad I.P.Pavlov), 99 copies (KB, 46-58, 142)

-69-

VARTANYAN, G.A.; MERKULOV, V.L.; MENITSKIY, D.N.

Professor Norbert Wiener's (U.S.A.) report at the Institute of  
Experimental Medicine of the Academy of Medical Sciences of the  
U.S.S.R., July 22, 1960. Fiziol. zhur. 46 no.12:1518-1519 D '60.  
(MIRA 14:1)

(ELECTROENCEPHALOGRAPHY)

VARTANYAN, G.A.; MENITSKIY, D.N.

Method for the investigation of conditioned motor-defense reflexes  
in fish with recording of conditioned motor reactions. Zhur.vys.  
nerv.deiat. 10 no.6:918-921 N-D '60. (MIRA 14:1)

1. Otdel sravnitel'noy fiziologii i patologii Instituta eksperimental'noy  
meditsiny Akademii meditsinskikh nauk SSSR.  
(CONDITIONED RESPONSE)

VARTANYAN, G.A.

Some characteristics of the conditioned reflex activity in carps.  
Zhur. vys. nerv. deiat. 12 no.4:740-747 J1-Ag '62. (MIRA 17:11)

1. Laboratory of Comparative Physiology and Pathology, Institute  
of Experimental Medicine, U.S.S.R. Academy of Medical Sciences,  
Leningrad.



VARTANYAN, G.A.; MAGRACHEV, Ya.I.; MENITSKIY, D.N.

Simplified semiautomatic device for producing glass microelectrodes.  
Fiziol.zhur. 48 no.5:619-620 My '62. (MIRA 15:8)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.  
(ELECTROPHYSIOLOGY--EQUIPMENT AND SUPPLIES)

VARTANYAN, G.A.; VASILEVSKIY, N.N.

Instability of responses from the neurons of the central nervous system. *Fiziol. zhur.* 49 no.4:398-404 Ap '63. (MIRA 17:4)

1. From the Laboratory of Comparative Physiology and the Laboratory of Cybernetics, Institute of Experimental Medicine, Leningrad.

VARTANYAN, G.A.; VASILEVSKIY, N.N.

Optimum frequencies for afferent stimulation of the intermediate  
neurons of the spine. Dokl.AN SSSR 149 no.1:210-212 Mr '63.  
(MIRA 16:2)

1. Institut eksperimental'noy meditsiny AN SSSR. Predstavleno  
akademikom V.N.Chernigovskim.  
(Nerves, Spinal) (Electrophysiology)

VARTANYAN, G.A.; VASILEVSKIY, N.N.

Evaluation of the functional properties and reactions of individual neurons of the central nervous system. Fiziol. zhur. 50 no.2:153-160 (MIRA 18:2)  
F '64.

1. Otdel sravnitel'noy fiziologii i patologii Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

VARTANYAN, G.A.

Stable changes of membrane potentials of the spinal motor neurons during afferent high-frequency stimulation. Fiziol. zhur. 50 no.3: 272-279 Mr '64. (MIRA 18:1)

1. Otdel sravnitel'noy fiziologii i patologii Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

VARTANYAN, G.A. (Leningrad)

Some aspects of neurophysiological studies in the laboratories of  
the U.S.A. Fiziol. zhur. 51 no.1:142-146 Ja '65. (MIRA 18:7)

L 29367-66

ACC NR: AP6019797

SOURCE CODE: UR/0239/65/051/004/0424/0430

AUTHOR: Vasilevskiy, N. N.; Klimova-Cherkasova, V. I.; Vartanyan, G. A.

34.  
B

ORG: Institute of Experimental Medicine, AMN SSSR, Leningrad (Institut eksperimental'noy meditsiny AMN SSSR)

TITLE: Structural and functional interrelationships between excitation and inhibition in the central nervous system 22

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 4, 1965, 424-430

TOPIC TAGS: central nervous system, cat, neuron, neurophysiology

ABSTRACT: In experiments with cats, individual motor neurons of the spinal cord were stimulated electrically by applying the microelectrode technique. At current frequencies  $\approx$  300 cycles excitation postsynaptic potentials were suppressed entirely and only inhibition postsynaptic potentials were observed. In another series of experiments, also conducted on cats, the response of a thin bundle of n. vagi fibers upon bipolar stimulation of medial divisions of the brain stem (medial nuclei of the thalamus, central grey matter around the aqueduct of sylvius) was studied. It was established that within the motor nucleus of the vagus nerve motor neurons differed in regard to their functional characteristics as far as stimulation and inhibition of discharges synchronous with inhalation (inspiration) and exhalation.

Card 1/2

UDC: 612.822.3

L 29367-66

ACC NR: AP6019797

(expiration) was concerned. At sufficiently high frequencies (> 200 cycles) of the current applied, neurons stimulating inspiration were inhibited, while neurons inhibiting inspiration were activated. Frequencies > 200 cycles were optimum for expiration, while those in the range from 30 to 100-200 cycles had an optimum effect in stimulating inspiration. It was established in earlier work done by other investigators that two types of fiber are present in the vagus nerve, i.e., fibers that transmit efferent impulses stimulating inspiration and fibers that transmit efferent impulses stimulating expiration. Both series of experiments indicated that there are functional differences between activating and inhibiting systems entering into the composition of the coordinating mechanisms of nerve activity and that these systems must be structurally distinct. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 29Dec63 / ORIG REF: 009 / OTH REF: 009

Card 2/2 *ca*



VARTAN'YAN, G.P.; KHUTORETSKIY, G.M.

First Soviet-made 200 mw-capacity turbogenerators. Biul.tekh.-  
ekon.inform. no.11:38-40 ' 58. (MIRA 11:12)  
(Turbogenerators)

VARTAN'YAN, G.P., inzh.; D'YACHENKO, G.I., inzh.

Large turbogenerators designed by the S.M.Kirov "Elektrosila" factory  
and a branch of the All-Union Scientific Research Institute of  
Electromechanics. Vest.elektromom. 33 no.4:16-18 Ap '62.  
(Turbogenerators)

SAVEL'YEV, V.P.; KOVAL'SKAYA, A.V.; BERUKOV, F.V.; GALKIN, Yu.P.; KROKHOTIN,  
A.I.; SINEGUBKIN, V.V.; EFSHTEYN, A.L.; TSIRKIN, M.Z.; LAVRUSHINA, N.S.;  
G'BAROV, A.A.; KONTOROVICH, L.M.; KOROLEV, V.N.; USTIMENKO, I.L.;  
KURNAKOV, S.N.; POLUSHKIN, M.K.; LIBE, N.A.; IVANOV, N.P.; D'YACHENKO,  
G.I.; FILIPPOV, I.F.; KHUTORETSKIY, G.M.; VARTAN'YAN, G.P.; RUSOV, Ye.Kh.;  
BARKAN, L.Z.; KOLONSKAYA, L.M.; GORBATENKO, F.I.

Inventions. Energ. i elektrotekh. prom. no.4:39 C-D '62. (MIRA 18:3)

VARTANYAN, G.S.

Using the methods of the mass sampling of deep hydrochemical  
holes for deciphering the structure of mineral water deposits.  
Biul. MOIP. Otd. geol. 40 no.2:140-143 Mr-Ap '65. (MIRA 18:5)

VARTANYAN, G.S.

Hydrogeological conditions in the Neftyanye Kamni field. (Apsheiron Peninsula). *Bul.MOIP.Otd.geol.* 34 no.4:165 JI-Ag 159. (MIRA 13-8)

(Neftyanye Kamni region--Water, Underground)

USSR/Engineering - Hydraulics, Water Level Control

Apr 52

"Device for Remote Control of Liquid Level,"  
G. V. Vartanyan

"Gidrotekh i Melio" No 4, pp 74-76

Describes device for remote control of level of water or other liquid. It comprises 2 stainless electrodes installed in reservoir at certain angle to each other and connected into one of arms of measuring bridge; thickness of liquid between electrodes represents variable resistance of this arm. Measuring of sp resistance of water

212T51

is realized by controlling plate attached to one electrode with aid of insulator. To eliminate polarization phenomenon, bridge is fed from high-frequency vacuum-tube oscillator, action of which is based on using RC quadripole with electron tube. Accuracy of device readings of 1 mm of liquid level. Awarded Certificate of Authorship No 81312.

212T51

А . 5 НУХИУИУА

VARTANYAN, G.V.

Recording Instruments

New methods for measuring water horizons in canals and distance transmission of measurements. Dost. sel'khoz., No. 9, 1952.

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

VARTANYAN, G.V.

Hydrodynamics

Methods based on principles of electrical and radio engineering for measuring the velocity of water. Gidr.i. mel. 4 No. 5, 1952.

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



VARTANYAN, G.V.

Determination of the leveling moment of water-race levels for remote automatic control of sluice gates. Gidr.stroi. 22 no.10:40-42 0 '53. (MLRA 6:10)  
(Sluice-gates) (Water meters)

VARTANYAN, I.A.; MARUSEVA, A.M.

Electrical responses of the cochlea in rats under the effect of short sound signals (clicks). Fiziol. zhur. 51 no.9:1037-1042 S '65. (MIRA 18:9)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P.Pavlova AN SSSR, Leningrad.

VAERTANYAN, I.A.

Quantitative characteristics of temporary summation in colliculus posterior and lemniscus lateralis of the brain in rats. Zhur. vys. nerv. deiat. 16 no. 1:103-111 Ja-F '66 (MIRA 19:2)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad. Submitted January 28, 1965.

L 29017-60

ACC NR: AP6018856

SOURCE CODE: UR/0239/65/051/009/1037/1042

AUTHOR: Vartanyan, I. A.; Maruseva, A. M.

ORG: Laboratory of the Physiology of the Auditory Analysor, Institute of Physiology  
in. Pavlov, AN SSSR, Leningrad (Laboratoriya fiziologii slukhorogo analizatora Instituta  
fiziologii AN SSSR)

TITLE: Electrical responses of the rat cochlea to the action of brief acoustic clicks

SOURCE: Fiziologicheskii zhurnal SSSR, v. 51, no. 9, 1965, 1037-1042

TOPIC TAGS: rat, man, cat, bioelectric phenomenon, audition

ABSTRACT: The range of sounds perceived by rats comprises frequencies higher than those to which the auditory apparatus of human beings and of such laboratory animals as cats and dogs still responds. Hitherto the functional characteristics of the auditory system of rats were studied mainly on the basis of behavior reactions. Under the circumstances it was of interest to measure electric auditory reactions of rats and compare them with those of animals that respond to sound stimuli of lower frequencies. The technique of the experiments was the same as in those carried out on cats. As stimuli clicks with a duration of 0.2 msec were used, which were emitted by a loud-speaker with a frequency range of 200-7,000 cycles. The latent periods of the reactions in rats were 50% greater than in cats, while the amplitude was lower by a factor of 10. For the responses of the cochlea of rats, a high amplitude of the second nerve component N<sub>2</sub> was characteristic; its value was often close to that of the first nerve component N<sub>1</sub>. The time of restoration of the amplitude of the rat cochlea response, measured on application of sound stimuli 40-45 db above the threshold, was considerably greater than for cats, i.e., by 60-74 msec. On the basis of the results obtained, the auditory system of rats can be described as inert.

Orig. art. has 3 figures and 1 table. (JPRS)

UDC:

Card 1/1 SUB CODE: 06/ SUBM DATE: 10Apr64/ ORIG REF: 002/ OTH REF: 007/612.822,3+612.858

L 31187-66

ACC NR: AP6022564

SOURCE CODE: UR/0219/66/061/002/0003/0006

AUTHOR: Vartanyan, I. A.; Lebedeva, Z. P.; Maruseva, A. M. 25  
BORG: Laboratory of Auditory Analysor Physiology, Institute of Physiology im.  
I. P. Pavlov, AN SSSR, Leningrad (Laboratoriya fiziologii slukhovogo analizatora  
Instituta fiziologii AN SSSR)TITLE: Electrical reactions of the inferior colliculus of rats to brief sounds (clicks) 22

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 61, no. 2, 1966, 3-6

TOPIC TAGS: electrophysiology, rat, acoustic biologic effect, audition

ABSTRACT: The electrical reactions of the inferior colliculus of rats are similar to those of cats. Typically, they start with a rapid positive wave followed by a slow negative deviation. In some cases two positive waves with a subsequent negative deviation were recorded. The amplitude of the reactions in the 30 anesthetized white rats studied ranged from 70-400 microvolts. The maximum amplitude was noted in the experiments in which the electrode was in the center of the nucleus. The thresholds of the reactions were somewhat higher than the audibility thresholds of man under the same conditions.

The average threshold in the rats with normal middle ear was somewhat higher than that in cats (the difference was no more than 5 db). The average length of the latent period of the reaction to the clicks was 3.1 milliseconds with the intensity of the stimulus 45-50 db above the threshold. When the intensity of the signal was changed 5-80 db above the threshold,

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L 31167-66

ACC NR: AP6022564

the latent period decreased from 5 to 2.8 milliseconds. The duration of the positive wave of the response had different values -- from 2.4 milliseconds.

The amplitude of responses caused by a second signal presented at intervals of 3-100 milliseconds from the first was 50% of the amplitude of the first response at a 3-4.6 milliseconds interval. Complete restoration of the amplitude of both responses usually required 60-70 milliseconds.

This paper was presented by Academician V. N. Chernigovskiy on 1 August 1964. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 01Aug64 / ORIG REF: 006 / OTH REF: 013

Card 2/2 CC

CHUKHNO, A.A.; KOZLOV, G.A.; KASHCHENKO, A.I.; AGANBEGYAN, A.G.; VOLKOV, M.I.; ZHUKOVSKIY, Ya.M.; NAGORNIY, A.F.; TSAGOLOV, N.A.; KOVALEVA, M.F.; PAVLOV, P.M.; ATLAS, M.S.; KATS, A.I.; NAROVLYANSKIY, N.G.; ANCHISHKIN, I.A.; SPIRIDONOVA, N.S.; KRONROD, Ya.A.; SULIMOV, I.A.; BREGEL', E.Ya.; ROZENMAN, Ye.S.; VARTANYAN, K.A.; HOVIKOV, V.A.; GATOVSKIY, L.M.

Structure and content of the course on the economics of socialism.  
Vop. ekon. no.6:57-143 Je '62. (MIRA 15:6)

1. Kiyevskiy gosudarstvennyy universitet (for Chukhno).
2. Vysshaya partiynaya shkola pri Tsentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Kozlov, Volkov, Zhukovskiy).
3. Yaroslavskiy gosudarstvennyy pedagogicheskiy institut (for Kashchenko, Narovlyanskiy, Sulimov).
4. Institut ekonomiki i organizatsii promyshlennogo proizvodstva Sibirskogo otdeleniya AN SSSR (for Aganbegyan).
5. Institut povysheniya kvalifikatsii prepodavateley obshchestvennykh nauk pri Kiyevskom gosudarstvennom universitete (for Nagornyy).
6. Moskovskiy gosudarstvennyy universitet (for TSagolov, Spiridonova).
7. Akademiya obshchestvennykh nauk pri Tsentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Kovaleva).
8. Leningradskiy finansovo-ekonomicheskiy institut (for Pavlov).
9. Moskovskiy finansovyy institut (for Atlas).
10. Nauchno-issledovatel'skiy institut truda (for Kats).
11. Institut ekonomiki AN SSSR (for Anchishkin, Kronrod).
12. Moskovskiy ekonomiko-statisticheskii institut (for Bregel').
13. Moskovskiy energeticheskii institut

(Continued on next card)

CHUKHNO,---(Continued) Card 2.

(for Rozenman). 14. Armyskiy sel'skokhozyaystvennyy institut  
(for Vartanyan). 15. Permskiy politekhnicheskiy institut (for  
Novikov). 16. Chlen-korrespondent Akademii nauk SSSR, glavnyy  
redaktor zhurnala "Voprosy ekonomiki" (for Gatovskiy).  
(Economics--Study and teaching)





117

Flotation of Pirdouan (Armenia) molybdenum-copper ore. N. G. Gomelauri and K. T. Vajjanyan. *Mineral. Syr's* 11, No. 10, 30-48 (1930).--Optimum conditions of combined and fractional flotation of chalcopyrite-molybdenite ore contg. 0.15% Mo and 1.2% Cu are described. One ton of ore is crushed to 200-mesh (59.3%) and then treated with 0.5 kg. CaO, 0.11 kg. xanthate, 0.12 kg. kerosene and 0.07 kg. pine oil, giving a combined extn. of 80-90% Mo and 75% Cu at a concn. of 1.11% Mo and 7.50% Cu. Mo could not be satisfactorily sepd. from Cu in the concentrate with the aid of all common depressing agents and even after intermediate removal of xanthate from the concentrate by careful washing with hot water (50°). It is evident that a complete depression of chalcopyrite is impossible because of the formation of a persistent hydrophobic surface film of xanthate. Use of smaller amts. of xanthate (0.05 kg./ton) produced better but not complete sepn. of Mo and Cu in the following selective flotation. A complete sepn. of Mo and Cu resulted from the alk. selective flotation with subsequent refinements of the concentrates. One ton of ore is mixed with 0.5 kg. CaO in the process of grinding to 200 mesh (50.3%). For the sepn. of molybdenite, the mixt. is floated with 0.07 kg. kerosene and 0.05 kg. pine oil for 12 min. The Cu ore fraction is stirred with 1 kg. CaO and 0.1 kg. xanthate for 5 min., and then is floated with addn. of 0.15 kg. pine oil for 20 min. The extn. of Cu is improved by addn. of 0.5 kg. Na<sub>2</sub>S toward the end of the Cu flotation, resulting in sepn. of 80-85% Cu at a concn. of 5-6%. The content of Cu in the concentrate can be increased to 12-15% by subsequent refining. After 4 refloatations of the molybdenum fraction in the presence of Na<sub>2</sub>S, a concentrate with 85% molybdenite contg. 0.4-0.5% Cu is obtained. By addnl. grinding of the molybdenum fraction, the extn. of Mo is increased to 90-92% and the loss of Cu in tailings is decreased to 10-12%.

Chas. Blanc

AS - 11 A METALLURGICAL LITERATURE

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netic sign of the nonfresh ("Tadling") product. The

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SOV/137-58-7-14034

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p7 (USSR)

AUTHOR: Vartanyan, K. T.

TITLE: ~~Significance of Direct Selection for Production of High-quality Concentrates and the Flotation of Ores Difficult to Dress~~  
(Znachenie pryamoy seleksii dlya polucheniya vysokosortnykh kontsentratov i flotatsii trudnoobogatimyykh rud)

PERIODICAL: V sb.: Obogashcheniye rud tsvetnykh metallov. Moscow, Metallurgizdat, 1956, pp 67-73

ABSTRACT: Direct selective flotation of Mo-Cu ores is run with depression of the Cu minerals by  $\text{Na}_2\text{S}$  at an initial concentration of 1-3 g / liter of pulp. The flowsheet suggested makes it possible to attain both a high quality of concentrate and a high rate of recovery of the metal. A comparative table of process indices is adduced. The new method is termed "flotation conditioning of flotation feed" or "multiflow stepwise flotation". The different behavior of  $\text{Na}_2\text{S}$  in metered and in bulk proportioning is noted.

1. Copper-molybdenum ores--Processing
2. Copper-molybdenum ores--Flotation

K. A.

Card 1/1

15-57-5-6625

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,  
p 133 (USSR)

AUTHORS: Vartanyan, K. T., Lutsenko, V. I.

TITLE: The Concentration of Feldspar-Quartz Sands and Their  
Industrial Application (Obogashcheniye polevoshpatovo-  
kvartsevykh peskov i ikh promyshlennoye ispol'zovaniye)

PERIODICAL: Soobshch. AN GruzSSR, 1956, Vol 17, Nr 5, pp 409-416.

ABSTRACT: The sands of Georgia [the Shukrutskoye, Sachkherskoye,  
Suramskoye, and other mestorozhdeniye (deposits)] are  
of the feldspar-quartz type. Factory tests have shown  
that the proportions of 89 percent  $\text{SiO}_2$ , 7 percent  
 $\text{Al}_2\text{O}_3$ , and 0.2 percent  $\text{Fe}_2\text{O}_3$  are entirely suitable for  
foundry sands in making cast iron and fine steel  
casting and also for the complex feldspar-quartz base  
to produce fine ceramics. Improvement in the mineral  
composition of the sands, i.e., concentration of quartz  
in the sands, may be accomplished by improving the  
grain content through elimination of the upper (grain

Card 1/2



15-57-5-6625

The Concentration of Feldspar-Quartz Sands (Cont.)

size from 1.0 to 0.85 mm) and the lower (grain size less than 0.21 to 0.15 mm) classes of grains. These sizes contain the principal part of the harmful impurities: feldspar, clay, mica, iron hydroxides, etc. The middle size of sand (grain size from about 1.0 mm to 0.85 mm down to 0.21 mm to 0.15 mm and containing 70 to 80 percent  $\text{SiO}_2$ ) represents the part of the raw material with the greatest quartz concentration and is called by the author the productive class of feldspar-quartz sands.

Card 2/2

V. P. Ye.

TRUSHNEVA, V.S.; GALIGUZOV, N.S.; MAKAYENKO, I.I.; RABINKOVA, T.S.;  
VARTANYAN, K.G.

Discussions. Trudy Mekhanobr no.98:60-75 '56. (MLRA 10:7)  
(Ore dressing)

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S/137/62/000/002/023/144  
A006/A101

AUTHORS: Vartanyan, K. T., Tevonyan, M. S.

TITLE: Investigating a new depressor for selective flotation of molybdenum-copper ores

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 8, abstract 2055 ("Yezhegodnik Kavkazsk. in-ta mineral'n syr'ya za 1957 g", Moscow, Gosgeoltekhizdat, 1959, 20)

TEXT: The authors investigated a new depressor for flotating Agarak-type Cu-Mo-ores, containing carbonaceous substances. When investigating this depressor, ores of the Agarak deposit were employed which contained in %: Mo 0.05, Cu 0.3, Fe about 2. The ore contains 0.6% carbonaceous substances. The new depressor which can be used for depressing both carbonaceous substances and Cu minerals, will, probably, ensure the production of conditional Mo-concentrate.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 1/1

S/137/62/000/002/030/1  
A006/A101

AUTHORS: Vartanyan, K. T., Kapanadze, M. G.

TITLE: Investigating the concentration ability of tungsten-molybdenum ores of the Baynazar deposit in the Karaganda Oblast' of Kazakh SSR

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 8, abstract 2057 ("Yezhegodnik Kavkazsk. in-ta mineral'n. syr'ya za 1957 g." Moscow, Gosgeoltekhizdat, 1959, 21-22)

TEXT: Investigations were made with ore, containing 0.04% Mo, 0.11% WO<sub>3</sub> and 0.05% Cu. In connection with the high flotability of molybdenate and the presence of fine-disseminated tungstenite in the ore, molybdenum flotation with tungstenite extraction from the tails was performed by the gravitation and flotation method. To obtain Mo-concentrate, conditional as to the Cu content, selective flotation with Cu-mineral and pyrite depression is necessary. Extraction of Mo into a final grade I concentrate without considering a possible additional extraction from industrial products, attained 50%. The method of concentration on a table of flotation tails, yielded tungsten concentrate where the WO<sub>3</sub> content

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was 4.16% after 3 purification operations at 48% extraction. During flotation of tails coarse concentrates were obtained containing  $WO_3$  0.4 - 0.6% at 85-95% extraction.

A. Shmeleva

[Abstracter's note: Complete translation]

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AUTHORS: Vartanyan, K. T., Tevonyan, M. S.

TITLE: Investigating the concentration capacity of low-molybdenum ore of the Dzhindarin deposit (Armenian SSR)

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 8, abstract 2054 ("Yezhegodnik Kavkazsk. in-ta mineral'n. syr'ya za 1957 g.", Moscow, Gosgeoltekhizdat, 1959, 22-23)

TEXT: The authors investigated poor Cu-Mo ore containing 0.5% Cu and 0.022% Mo. According to the scheme of direct selective flotation a conditional Mo concentrate was obtained, containing 47.88% Mo, with extraction of 53% in an open cycle. The Cu-content in the Mo-concentrate was 0.56%. There is a possibility of obtaining a Mo-product with a considerably higher extraction percentage. Conditional Cu-concentrate is obtained with 15% Cu content at 65% extraction. To activate Cu minerals it is proposed to replace H<sub>2</sub>SO<sub>4</sub> by new activators - HCl, HNO<sub>3</sub>, H<sub>2</sub>O<sub>2</sub> and K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>.

A. Shmeleva

[Abstracter's note: Complete translation]

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**AUTHORS:** Vartanyan, K.T., Shukakidze, N.D.

**TITLE:** Developing a flotation-hydrometallurgical method of concentrating gold-containing antimonous-arsenous ores of the Zopkhito deposit (Verkhnyaya Racha)

**PERIODICAL:** Referativnyy zhurnal: Metallurgiya, no. 12, 1961, 11, abstract 12076 ("Yezhegodnik Kavkazsk. in-ta mineral'n. syr'ya za 1957 g", Moscow, Gosgeoltekhizdat, 1959, 23 - 24)

**TEXT:** According to results of chemical analysis the technological ore sample contained Sb 2.9% in the form of antimonite, and in the form of Sb oxidized-compounds about 10%, As 1.27%, Fe 6% and Au about 2.2 g/ton of ore. Tests on coarse flotation of Sb were made during a short period of time, the ore was crushed up to 60% of class-0.074 mm, with lime admixtures of 0.5-1.0 kg per 1 ton of ore. Flotation of As-pyrite concentrate was carried out after crushing of tails of As-flotation up to 74.48% of class-0.074 mm. Under such conditions after two scourings Sb concentrates of first class were obtained with 61.1% Sb, and of second class with 20.15% Sb; coarse As-pyrite concentrates with 6.5% As

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content were also obtained at 67.72% extraction. After scouring the concentrate contains 21.52% As. Au concentration is observed in As-pyrite concentrate where its content attains 10.6 kg/t.

L. Vorob'yeva

[Abstracter's note: Complete translation]

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1. Institut onkologii AMN SSSR.

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