ACCESSION NR: AR5004799

$$\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} \qquad (1)$$

$$\left.\begin{aligned} u(0, y) = u(1, y) = 0, \quad -\rho_2 \leq y \leq \rho_1, \\ u(x, \rho_1) = f_1(x) \\ u(x, -\rho_2) = f_2(x) \end{aligned}\right\}, \quad 0 < x < 1, \qquad (2)$$

$$f_1(0) = f_1(1) = f_2(0) = f_2(1) = 0$$

The question of the existence and uniqueness of the solution of the

$$\operatorname{ctg} n\pi\rho_2 + \operatorname{cth} n\pi\rho_1 = 0 \qquad (3)$$

has at least one solution in natural numbers n, then the uniqueness of the solution of the problem (1)--(2) does not hold, no matter how

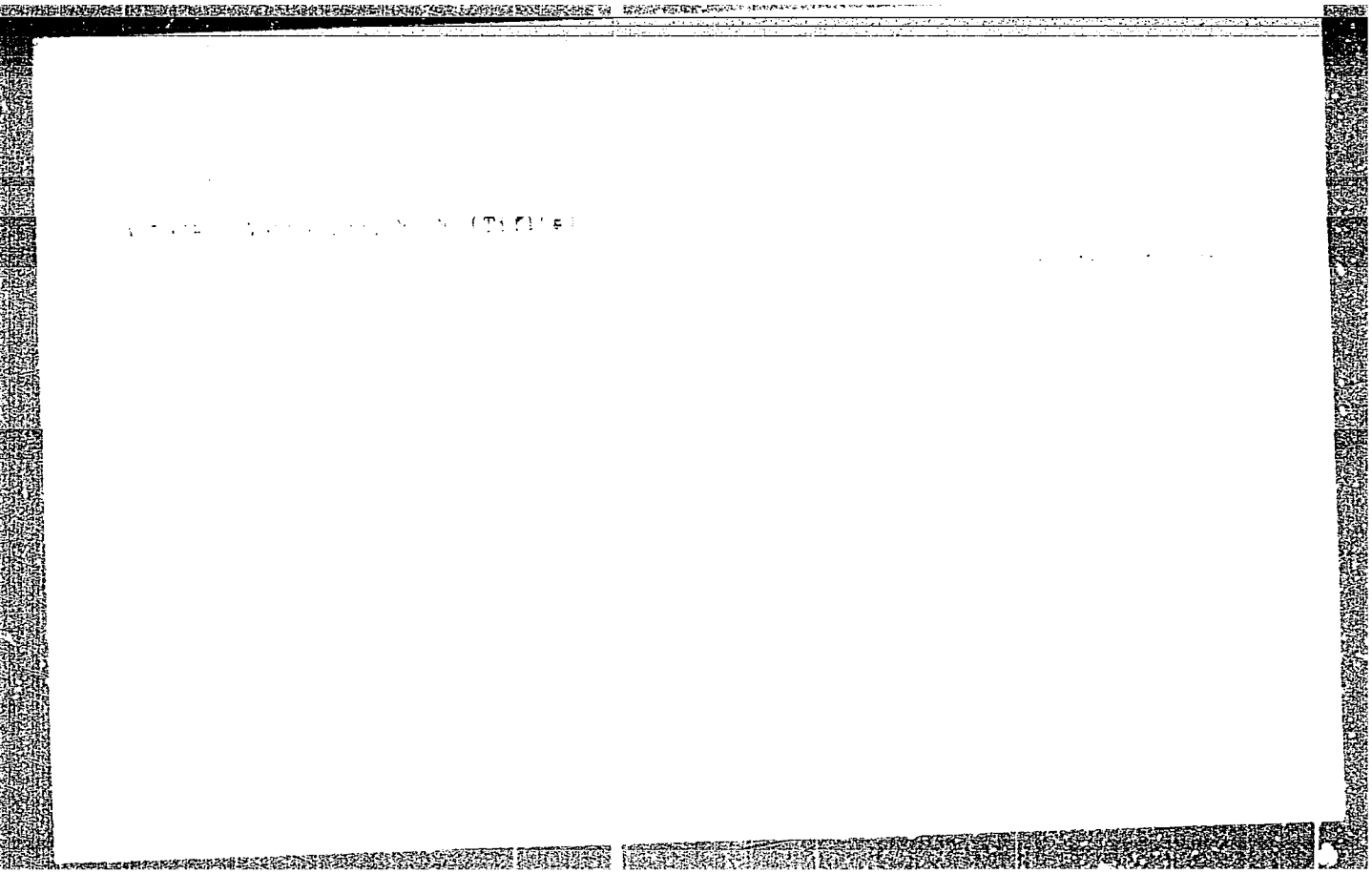
L 31299-65

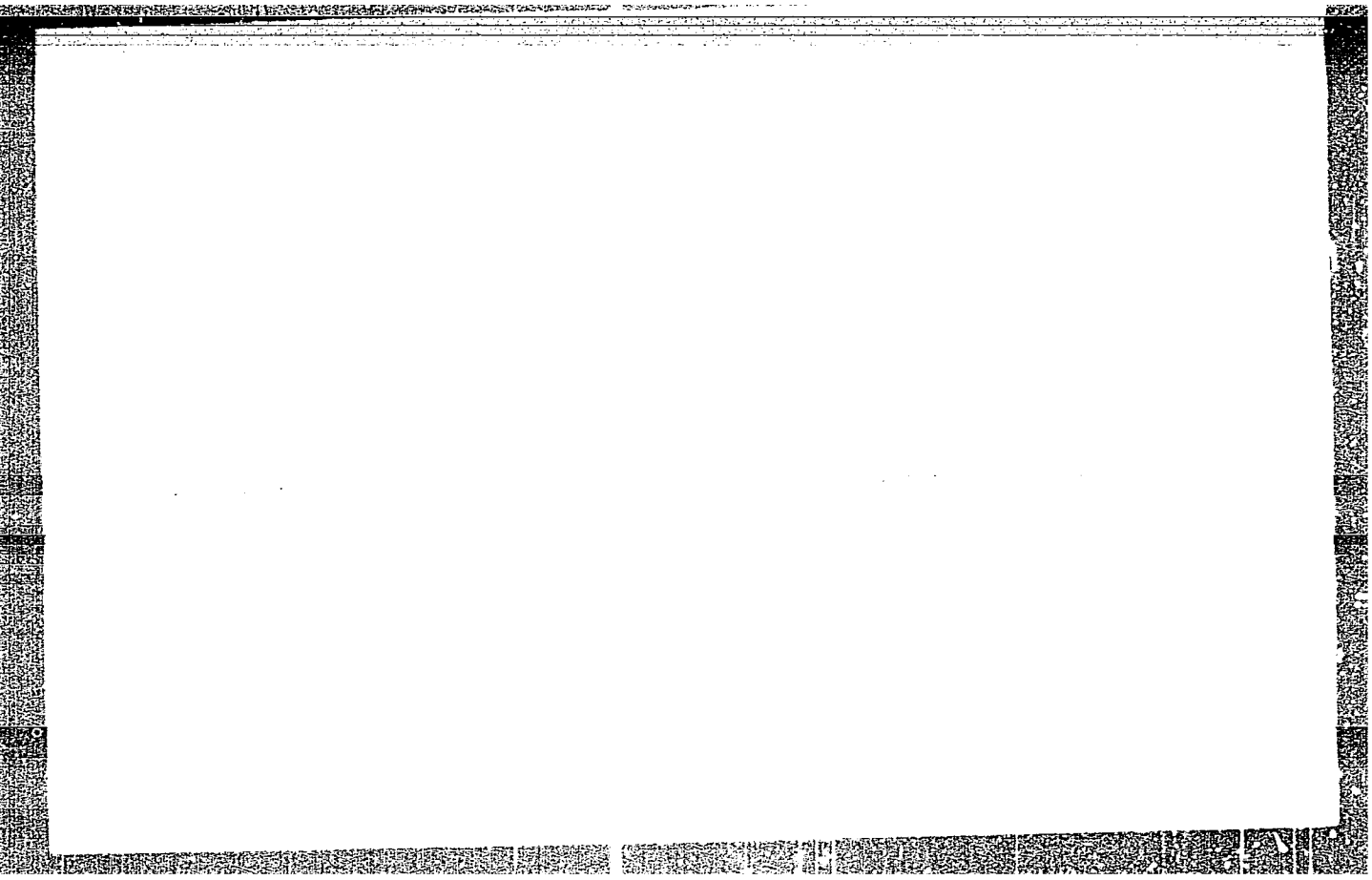
ACCESSION NR: AR5004799

The degree of smoothness [illegible] solvability depends on

VAKHANIYA, N.N. (Tbilisi)

Normal distributions in l_p -spaces. Teor. veroiat. i ee prim. 9 no.4:737-738 '64. (MIRA 17:12)





APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858410009-5"

VAKHANIY[illegible]

Characteristic functionals for random sequences. Trudy Vych. tsentr. AN Gruz. SSR 5:5-32 '65. (MIRA 18:9)

15-57-10-14466

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, pp 182-183 (USSR)

AUTHOR: Vakhaniya, Ye. K.

TITLE: The Stratigraphy and Oil Potential of the Maykop Series in Guria (Stratigrafiya i neftenosnost' maykopskoy svity Gurii)

PERIODICAL: Novosti neft. tekhn. Geologiya, 1956, Nr 4, pp 7-10

ABSTRACT: The Maykop series in the normal sections of Guria lies between the upper Eocene and the Tarkhan horizon. The Khadumskiy horizon of lower Oligocene age is present in the lower part of the series. The overlying bed of Maykop clays belongs to the middle and upper Oligocene. Above this unit occurs a sandy sequence with lower Miocene fossils, belonging to the Sakaraulskiy and Kotsahurskiy horizons. The upper clay beds of the Maykop series belong to the Kotsahurskiy

Card 1/2

The Stratigraphy and Oil Potential (Cont.)

horizon. There are no breaks in the Maykop series. The series formed in the Guria depression in a semi-closed basin with bottom contamination of H_2S. The parent material was the eroded debris from lower Paleozoic rocks of the Adzharo-Trialetskaya folded system. Quartz was supplied from small intrusions of young acidic rocks. Numerous occurrences of oil in the Guria depression are associated with the Maykop series. On the whole, the search for oil in the Neogene rocks has been directed toward the sandy formations in the lower part of the middle Miocene, but also toward the thick Donaurskiy sands of the lower Sarmatian. The Supsa and Chikvetskaya elongated domes are recommended as the principal areas for exploration.

N. A. Yeremenko

Card 2/2

VAKHANIYA, Ye.K.

On the stratigraphic position of the Tarkhan horizon in western Georgia. Dokl. AN SSSR 106 no.4:701-702 F '56. (MLRA 9:6)

1.Predstavleno akademikom N.S.Shatskim.
(Georgia--Geology, Stratigraphic)

VAKHANIYA, Ye.K.; PAPAVA, D.Yu.

Lower Miocene deposits of the Lechkhumskaya depression. Soob. A'I Gruz. SSR 18 no.1:55-58 Ja '57. (MLRA 10:5)

1. Neftepromyslovoye upravleniye "Gruzneft'," Tbilisi. Predstavleno akademikom I.V. Kacharava.
(Lechkhumskaya depression--Geography, Stratigraphic)

VAKHANIYA, Ye.K.

The age of the Colchis series. Soob. AN Gruz.SSR 18 no.3:315-319 Mr '57. (MLRA 10:7)

1. Neftepromyslovoye upravleniye "Gruzneft'." Predstavleno akademikom I.V.Kacharava.
(Geology, Stratigraphic)

BULEYSHVILI, F.A.; VAKHANIYA, Ye. K.

Stratigraphic scale of Tertiary sediments in Georgia. Trudy VNIGNI no.15:12-23 '59. (MIRA 14:6)
(Georgia—Geology, Stratigraphic)

VAKHANIYA, Ye.K.

Age of oysterbeds in the Uplistsikhe region. Trudy VNIGNI no.15:24-30 '59. (MIRA 14:6)
(Uplistsikhe region--Oysters, Fossil)

VAKHANIYA, Ye.K.

Stratigraphy, and oil and gas potentials of the Maikop series in Georgia. Trudy VNIGNI no.15:31-48 '59. (MIRA 14:6)
(Georgia--Petroleum geology)
(Georgia--Gas, Natural--Geology)

VAKHANIYA, Ye.K.; NIKURADZE, G.N.; ABESADZE, D.M.; GEGELIDZE, K.I.

Possible oil and gas occurances in Mesozoic sediments of western Georgia. Trudy VNIGNI no.15:66-78 '59. (MIRA 14:6)
(Georgia--Petroleum geology)
(Georgia--Gas, Natural--Geology)

VAKHANIYA, Ye.K.

Stratigraphy of the Lower Miocene sediments of Georgia. Izv. Geol. ob-va Gruz. 1 no.1:17-69 '59. (MIRA 17:8)

VAKHANIYA, Ye.K.

Miocene sediments of South Ossetia. Izv. Geol. ob-va Gruz. SSR no.2:15-25 '61 (MIRA 17:7)

VAKHANIYA, Ye.K.

Trends in and methods of oil and gas prospecting in Georgia. Sov. geol. 4 no.1:13-26 Ja '61. (MIRA 14:1)

1. Trest "Gruzneft'".
(Georgia--Petroleum geology)
(Georgia--Gas, Natural--Geology)

VAKHANIYA, Ye.K.

Recent data on the stratigraphy of Oligocene deposits of Mingrelia and adjacent regions of western Georgia. Soob. AN Gruz. SSR 27 no.4:419-426 O '61. (MIRA 15:1)

1. Sovet Narodnogo Khozyaystva Gruzinskoy SSR, trest "Gruzneft'". Predstavleno akademikom I.V. Kacharava.
(Georgia—Geology, Stratigraphic)

VAKHANIYA, Ye.K.; OLENIN, V.B.; SOKOLOV, B.A.

Eastern Black Sea oil- and gas-bearing basin. Zakonom. razm. polezn. iskop. 5:549-557 '62. (MIRA 15:12)

1. Trest "Gruzneft'" i Moskovskiy gosudarstvennyy universitet.
(Black Sea region—Petroleum geology)
(Black Sea region—Gas, Natural—Geology)

VAKHANIYA, Ye.K.

Age of the fresh water continental Neogene formations in Megreliya. Trudy GPI [Gruz.] no.2:27-33 '63. (MIRA 17:9)

VAKHANIYA, Ye.K.

Tectonic interrelationship of the central Mingrelian and Lechkhumi depressions. Soob. AN Gruz. SSR 38 no.1:103-110 Ap '65. (MIRA 18:12)

1. Submitted Sept. 15, 1964.

VAKHANIYA, Ye.K.

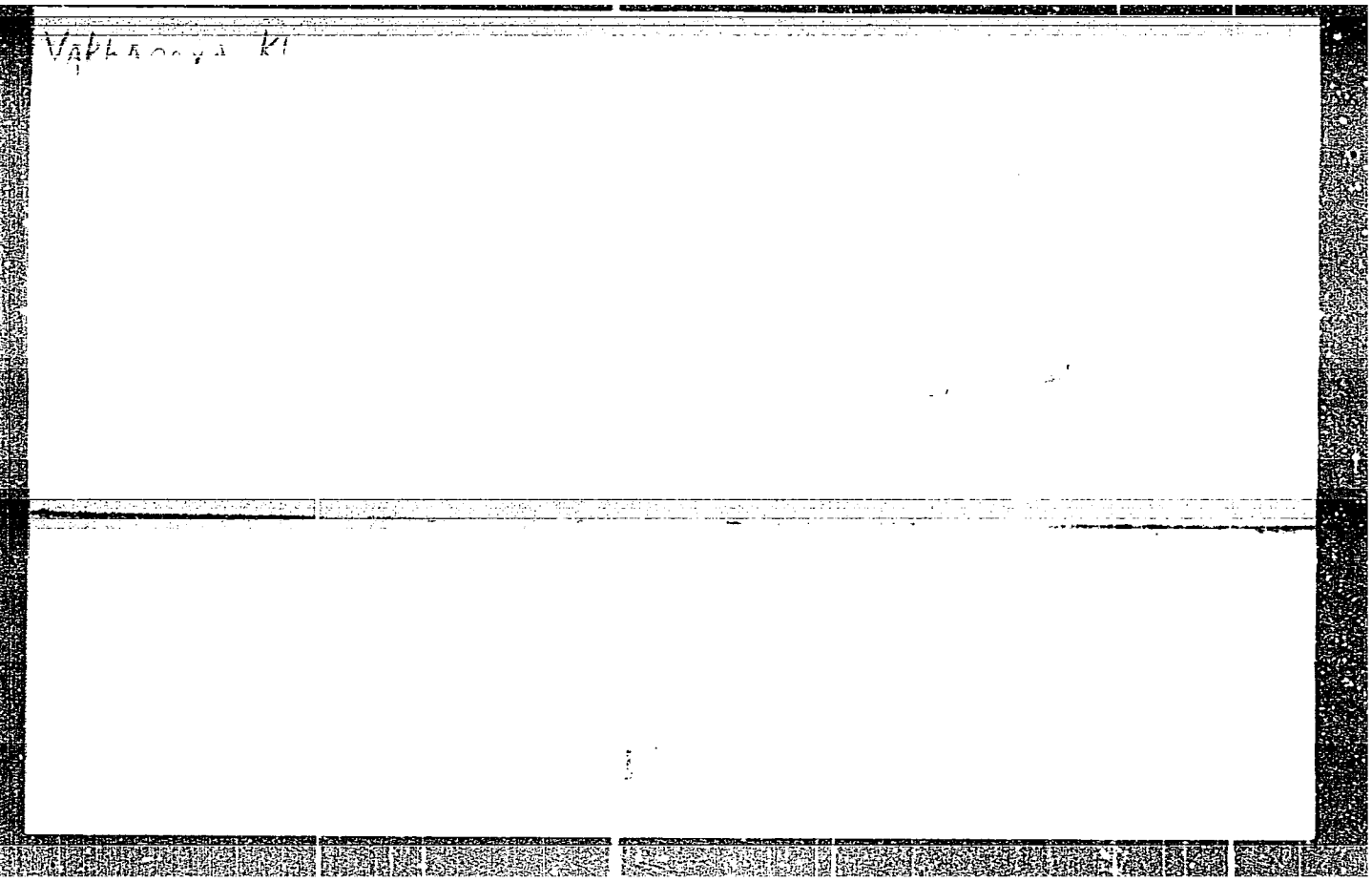
Interlayer folding phases, breaks, and unconformities of the Alpian dislocation era of the Kolkhida Lowland. Dokl. AN SSSR 165 no.3:633-635 N '65. (MIRA 18:11)

1. Trest "Gruzneft'", Tbilisi. Submitted June 21, 1965.

VAKHANIYA, Ye.K.

Structural stages of the Kolkhida Lowland. Soob. AN Gruz. SSR 38 no. 3:575-582 Je '65. (MIRA 18:12)

1. Trest "Gruzneft'". Submitted Oct. 14, 1964.



SIVERTSEV, Ivan Nikolayevich, professor; SMORODINSKIY, Naum Avseyevich, dotsent; SOBOLEV, Nikolay Nikoforovich, dotsent; VAKHARLOVSKIY, Gleb Anatol'yevich, inzhener; SHTENTSEL'V.K., redaktor; LYAKHNITSKIY,V.Ye., professor, doktor mekhanicheskikh nauk, redaktor; VOLCHOK,K.M., tekhnicheskiy redaktor

[Harbor hydraulic structures] Portovye gidrotekhnicheskie sooruzheniia. Leningrad, Izd-vo "Rechnoi transport," Leningradskoe otd-nie. Pt.2. 1955. 387 p. (MLRA 9:3)
(Hydraulic engineering)

SHEVANDIN, Ye.M., kand. tekhn. nauk; KOZLYAKOV, V.V., kand. tekhn. nauk; MAKSIMADZHI, A.I., inzh.; BYKOV, V.A., kand. tekhn. nauk; YEVSTIFEYEV, V.A., kand. tekhn. nauk; BELKIN, V.P., doktor tekhn. nauk; REZNITSKIY, L.Ya., kand. tekhn. nauk; PUTOV, N.Ye., prof.; SHIMANSKIY, Yu.A., akademik; GUREYEV, V.A., inzh.; VAKHARLOVSKIY, G.A., inzh.; KERICHEV, V.M.; KVASHUK, N.F., inzh.; NOGID, L.M., prof.; REVZYUK, G.A., inzh.; ARKHANGORODSKIY, A.G., kand. tekhn. nauk; YEFREMOV, inzh.; OSMOLOVSKIY, A.K., kand. tekhn. nauk.

General discussion. Trudy NTO sud. prom. 7 no.1:112-152 '56. (MIRA 10:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut im. A.N. Krylova (for Shevandin). 2. Leningradskiy korablestroitel'nyy institut (for Kozlyakov, Bykov, Putov, Nogid). 3. TSNIISTEF (for Maksimadzhi). 4. TSentral'noye konstruktorskoye byuro Ministerstva sudostroitel'noy promyshlennosti, g. Gor'kiy (Yevstifeyev, Kvashuk, Revzyuk). 5. TSentral'noye-proyektno-konstruktorskoye byuro Ministerstva morskogo flota (for Reznitskiy). 6. Ministerstvo sudostroitel'noy promyshlennosti (for Gureyev). 7. Gosudarstvennyy soyuznyy proyektnyy institut (for Vakharlovskiy). 8. Zavod "Krasnoye Sormovo" (for Kerichev). 9. NKI (for Arkhangorodskiy). 10. Ministerstvo rechnogo flota (for Yefremov). 11. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota (for Osmolovskiy).

(Shipbuilding)

VAKHATSKIY, B. A., Cand Tech Sci -- (diss) "Investigation of the parameters of the cutting elements of chain saws with Г-shaped teeth." Leningrad, 1960. 13 pp with diagrams; (Ministry of Higher and Secondary Specialist Education RSFSR, Leningrad Order of Lenin Forestry Engineering Academy im S. M. Kirov); 200 copies; free; (KL, 25-60, 130)

VAKHEL', V.Yu.: BALYUK, B.K.

Determining the speed for mounting a valve. Trakt. i sel'khozmash. 33 no.8:15-17 Ag '63. (MIRA 16:11)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po dvigatelyam.

VAKHELAYD, O.A.

"Temporary Settlements in the Construction of Water Power Installations." Cand Tech Sci, Leningrad Polytechnic Inst imeni M. I. Kalinin, Min Higher Education USSR, Leningrad, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

VAKHENYMM, K. G.

"The Effect of the Conditions of Seed Cultivation on the Breed Characteristics of Vegetables and Fodder Tubors." Acad. Sci. Estonian SSR, Inst. of Plant Breeding, Tallin, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

VAKHER, A., inzh.; BOGATIN, Kh., inzh.

Using vibration machines (nondrying) in making slag concrete blocks. Gor.i sel'.stroi.no.10:28 O '57. (MIRA 10:12)
(Vibrators) (Concrete blocks)

VAKHER, A., inzh.

Manufacturing soil-cement bricks in the Mytishchi Construction Trust. Gor. i sel'. stroi. no.11:16 N '57. (MIRA 11:1)
(Mytishchi--Brickmaking)

VAKHER, A.I., inzh.; SHUL'TS, A.K., inzh.

Unit for lubricating steel cables. Mekh. stroi. 18 no. 6:16-17 Je '61. (MIRA 14:7)
(Wire rope) (Lubricants and lubrication)

VAKHER, E.A. [Vaher, E.]; PETROV, R.M.

Investigating the drilling of large wells with a core-drill unit.
Khim. i tekh. gor. slan. i prod. ikh perer. no.11:93-101 '62.
(MIRA 17:3)

VAKHER, F. S.

USSR/Mathematics - Topology

Card 1/1 Pub. 22 - 1/52

Authors : Vakher, F. S.

Title : On the basis in the space of continuous functions determined on a compact

Periodical : Dok. AN SSSR 101/4, 589-592, Apr 1, 1955

Abstract : A proof is presented for the existance of a basis in the space C(Q) of continuous functions determined on any compact Q. Previously the existance of a basis in the space of continuous functions was prooved for the case when the functions were determined on a numerical segment of a straight line. Three references: 1 German and 2 USSR (1927 and 1946).

Institution : Middle Asia State University

Presented by: Academician A. N. Kolmogovov, January 7, 1955

VAKHER, F.S.

General form of a linear functional in the Banach space of analytic functions, and the A-integral. Dokl. AN SSSR 166 no.3:518-521 Ja '66. (MIRA 19:1)

1. Submitted May 15, 1965.

VAKHER, L., Cand of Agric Sci -- (diss) "The Zavodskoye herd of the Vyandraskiy Experimental Station and its utilization for the improvement of the long-horned cattle of the black-spotted Estonian breed." Tartu, 1957, 24 pp, (Estonian Agricultural Academy), 100 copies (KL, 29-57, 92)

VAKHER, L.

USSR/Farm Animals. Cattle Q-2

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 88043

Author : Vaher L.
Inst : Estonian Scientific Research Institute for Agriculture and Melioration
Title : The Domestic Herd of the Vandra Experimental Station and Its Utilization in Improving the Cattle of the Estonian Black-and-White Breed

Orig Pub : Byul. nauchno-tekhn. inform. Est. n.-i. in-t zemled. i Melior., 1957, 32-37

Abstract : As a result of the utilization of siring bulls of the black and white Holland-Friesian breed and their progeny, there was created a herd of animals with a high milk yield and milk fat content, high live weight, and sturdy constitution. The animals of this herd can be used for improving milk fat content within the limits of the breed.

Card : 1/1

L 34004-66

ACC NR: AT6013040 SOURCE CODE: UR/0000/65/000/000/0095/0104

AUTHOR: Pegel'man, S. G.; Poogelmann, S.; Vakher, Yu. I. — Vaher, U.

ORG: none

TITLE: Delayed effects of gamma irradiation on chicks

SOURCE: AN EstSSR. Institut eksperimental'noy biologii. Vliyaniye gamma-oblucheniya na organizmy (Effect of gamma rays on the organism). Tallinn, 1965, 95-104

TOPIC TAGS: medical experiment, gamma irradiation, irradiation effect, EXPERIMENT ANIMAL

ABSTRACT: Changes have been investigated in the body weight and egg production in adult hens after a one-time, whole-body γ-irradiation of 12-day-old chicks, with different doses (from 5 to 100 r). Marked differences were noted in the body weight of chicks exposed to different doses of γ-radiation. Large irradiation doses caused a weight loss. Small doses caused an increase in body weight at a higher rate than in nonirradiated control chicks. A statistically significant linear regression of body weight with a dose from 20 to 1000 r was observed, which regression had not disappeared 16 months after irradiation. Both the irradiated and nonirradiated chicks began to lay eggs at the same time, and the egg production was similar. Both the weight

Card 1/2

L 34884-66
ACC NR: AT6013040

of the eggs and the weight of the chicks at hatching time differed in irradiated and nonirradiated birds, corresponding to the irradiation dose. This correlation between the egg and chick weight and the irradiation dose is conditioned not by the irradiation effect, but by the body weight of the hens, which is affected by irradiation early in life. Orig. art. has: 5 figures and 1 table. [Based on author's conclusions] [NT]

SUB CODE: 06/ SUBM DATE: 30Jul65/ ORIG REF: 005/ OTH REF: 005

Card 2/2 Mjs

L 31885-66

ACC NR: AT6013041 SOURCE CODE: UR/0000/65/000/000/0105 0113

AUTHOR: Vakher, Yu. I.—Vaher, U.

ORG: none

TITLE: Changes in the radiation sensitivity of chicks during their growth

SOURCE: AN EstSSR, Institut eksperimental'noy biologii. Vliyaniye gamma-oblucheniya na organizmy (Effect of gamma rays on the organism). Tallinn, 1965, 105-113

TOPIC TAGS: medical experiment, radiation sensitivity, gamma irradiation, irradiation effect, EXPERIMENT ANIMAL, RADIATION BIOLOGIC EFFECT, BIOLOGIC AGING

ABSTRACT: Changes in the radiation sensitivity of chicks during their growth have been investigated. Remarkable alterations in the radiation sensitivity of Leghorn and New Hampshire chickens were observed during their growth period. The radiation sensitivity of chicks increases from 2 to 3 weeks of age and then decreases after 3 to 4 weeks of age. A new increase in the radiation sensitivity of chickens was observed during their growth period from 7 weeks up to 5 months of age. The radiation sensitivity of chickens was found to depend on the intensity of the irradiation dose. Large and intense γ-irradiation doses caused a high degree of mortality in chickens on the first and second days following the irradiation. This symptom makes it reasonable to assume that there is a specific radiation syndrome in birds with a

Card 1/2

L 34885-66
ACC NR: AT6013041

different death-producing pathologic mechanism than that which occurs in mammals. Orig. art. has: 2 figures and 3 tables. [Based on author's conclusions.] [NT]

SUB CODE: 06/ SUBM DATE: 30Jul65/ ORIG REF: 002/ OTH REF: 011

Card 2/2

L 34886-66

ACC NR: AT6013042 SOURCE CODE: UR/0000/65/000/000/0115/0124

AUTHOR: Vakher, Yu. I.—Vaher, U.

ORG: none

TITLE: Stimulation effect of Gamma irradiation on the growth of chickens

SOURCE: AN EstSSR. Institut eksperimental'noy biologii. Vliyaniye gamma-obluchen'ya na organizmy (Effect of gamma rays on the organism). Tallinn, 1965, 115-124

TOPIC TAGS: medical experiment, gamma irradiation, irradiation effect, EXPERIMENT ANIMAL, BIOLOGIC AGING, RADIATION BIOLOGIC EFFECT

ABSTRACT: The effect of γ-irradiation on the growth of chickens has been investigated. Stimulation of growth in young chickens had not disappeared long after small-dose γ-irradiation. The stimulatory effect of γ-irradiation on the body weight depends on the irradiation dose, dose intensity, and initial body weight of chickens. Small-dose γ-irradiation of young chickens causes an increase in egg weight. The greatest stimulatory effect was observed in doses from 20 to 100 r. Orig. art. has: 5 figures and 5 tables. [Based on author's conclusions.] [NT]

SUB CODE: 06/ SUBM DATE: 30Jul65/ ORIG REF: 006/ OTH REF: 003

Card 1/1

PEGEL'MAN, S.G.; VAKHER, Yu.I. [Vaher, J.]

Effect of sublethal doses of gamma irradiation on the growth and development of chickens. Radiobiologiia 5 no.3:382-389 '65. (MIRA 18:7)

1. Institut eksperimental'noy biologii AN Estonskoy SSR.

L 04267-67 EWT(m)/T DJ

ACC NR: AP6013315 (A) SOURCE CODE: UR/0413/66/000/008/0134/0134

AUTHORS: Drong, I. I.; Pritsker, P. Ya.; Kustanovich, S. L.; Vakher, V. I.; Bogdanov, S. A.; Kaloyev, A. V.; Chichikov, G. L.; Stetsenko, V. V.; Vitkevich, V. B.

33
13

ORG: none

TITLE: Hydraulic amplifier for a steering mechanism of a machine on wheels. Class 63, No. 180965

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 134

TOPIC TAGS: hydraulic device, hydraulic equipment, hydraulic pressure amplifier, VEHICLE COMPONENT

ABSTRACT: This Author Certificate presents a hydraulic amplifier for a steering mechanism of a machine on wheels. The amplifier is built into the steering mechanism and is connected to the steering shaft. It contains a lead element in the form of a screw, a power cylinder (with its shaft connected to a spline attached to a sector of the steering mechanism), and a distributor. The latter consists of a casing fixed on the gear box of the steering mechanism. The casing contains ducts leading to the working interior of the power cylinder and to its pressure and outflow pipes. A cylindrical valve placed in the casing is located on the steering shaft, while two stops limit the axial displacement of the steering shaft. To provide for the indication of gauge reading of the automatic steering augmented by hand steering, a distributing sleeve (which slides in respect to the cylindrical valve and to the

Card 1/2 UDC: 629.113-522.5

casing) is placed in the body of the distributor concentrically with the valve. The sleeve contains openings for passing of liquid and is motivated by plungers placed in the casing and connected to the gauge of automatic steering. These plungers interact with the face surfaces of washers contacting the sleeve. The washers serve as supports limiting the displacement of the sleeve in the casing (see Fig. 1).

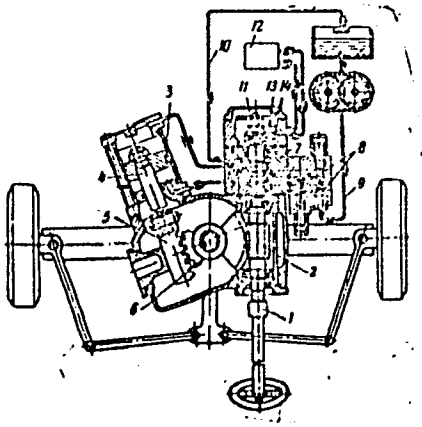


Fig. 1. 1 - steering shaft; 2 - screw; 3 - power cylinder; 4 - shaft of the power cylinder; 5 - spline; 6 - sector of the steering mechanism; 7 - distributor body; 8 - valves; 9 - pressure duct; 10 - overflow duct; 11 - cylindrical valve; 12 - automatic steering gauge; 13 - sliding sleeve; 14 - plungers

The working displacement of the sleeve (limited by the washers) is smaller than the working displacement of the valve. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 14Apr62
Card 2/2

VAKHIDOV, A.V., aspirant

Effect of the earth's surface cover on the coefficient of the DD-2 differential range finder. Trudy NIIZHT no.30:35-43 '62. (MIRA 16:9)

KHAYDAROV, A.Kh., prof.: OBUKHOVA, L.M.; VAKHIDOV, A.Z.

Strengthening the abdominal wall in recurrent ventral hernias by means of plastic repair of the aponeurosis and skin with an A.A. Limberg counter graft. Khirurgiia no.6:95-97 Je '61. (MIRA 14:11)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. A.Kh. Khaydarov) Samarkandskogo meditsinskogo instituta.
(HERNIA) (SKIN—TRANSPLANTATION)

VAKHIDOV, A.Z., dotsent

Professor A.Kh. Khaidarov; on his 50th birthday. Med. zhur. Uzb. no.12:81 D '61. (MIRA 15:2)
(KHAIDAROV, AKHAT KHALIKOVICH, 1911-)

VAKHIDOV, A.Z., dotsent

Topographical anatomical interrelations of the lumbar triangles with phrenicocostal sinuses in connection with the access to the subdiaphragmatic areas. Nauch. trudy SamMI 22:81-88 '63. (MIRA 17:9)

1. Iz kafedry gospital'noy khirurgii Samarkandskogo meditsinskogo instituta i kafedry operativnoy khirurgii i klinicheskoy anatomii TSentral'nogo instituta usovershenstvovaniya vrachey.

VAKHIDOV, D., zven'yevoy

Fabric in a brown box. IUn. nat. no.11:24 N '61.
(MIRA 14:11)

1. Shkol'noye khlopkovodcheskoye zveno shkoly imeni Dzerzhinskogo Tadzhikskoy SSR.
(Cotton growing)

RYABCHICH, V.F.; TSIPENYUK, I.F.; VAKHIDOV, D.N.

The problem of the durability of the reinforced concrete elements of foundry buildings. Prom. stroi. 40 no.9:40-44 '62. (MIRA 15:11)

1. Ural'skiy filial Akademii stroitel'stva i arkhitektury SSSR.

(Foundries)
(Reinforced concrete)

VAKHIDOV, M.

Structural Engineering

Dissertation: "Elastic and Elastic-Plastic Bending of Foundation Slabs." Cand Phys-Math Sci, Inst of Mathematics and Mechanics, Acad Sci Uzbek SSR, 17 Mar 54. (Pravda Ukrainy, Kiev, 6 Mar 54)

SO: SUM 213, 20 Sept 1954

[redacted], N.

[redacted], N. - "A psychological analysis of the [redacted] of various [redacted], [redacted]." [redacted], Leningrad Order of Lenin State U imeni A. A. Zhdanov, Chair of Psychology. (Dissertations for degree of Candidate of Pedagogical Sciences.)

SO: Knizhnaya letopis', No 48. 26 November 1956. Moscow.

VAKHIDOV, N.M.

Comparative study of seroimmunity against the poliomyelitis virus among the population of Dushanbe. Zdrav.Tadzh. 9 no.3:58-61 My-Je '62. (MIRA 15:8)

1. Iz Instituta poliomiyelita i virusnykh entsefalitov AMN SSSR, Moskva i Dushanbinskogo instituta epidemiologii i gigiyeny.
(DUSHANBE--IMMUNITY) (POLIOMYELITIS VIRUSES)

VAKHIDOV, N.M.

Frequency and duration of the isolation of the poliomyelitis vaccine virus from the pharyngeal lymphoid ring of persons vaccinated perorally with a live vaccine against poliomyelitis. Zdrav. Tadzh. 10.no1:39-42 ' 63. (MIRA 16:7)

1. Iz Instituta poliomiyelita i virusnykh entsefalitov AMN SSSR i Dushanbinskogo instituta epidemiologii i gigiyeny.
(POLIOMYELITIS—VACCINATION)

VAKHIDOV, R.S.

ZEBREVA, A.I.

5(2) PHASE I BOOK EXPLOITATION SOV/1699

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Issledovaniya po elektrokhimii vodnykh rastvorov i rasplavov i amal'gamnoy metallurgii (Research on the Electrochemistry of Water Solutions, Fusions and Amalgam Metallurgy) Alma-Ata, Izd-vo AN Kaz. SSR, 1958. 182 p. (Series: Its: Trudy, t. 3) 1,500 copies printed.

Ed.: V.V. Aleksandriyskiy; Tech. ed.: Z.P. Berezkina; Editorial Board of Series: I.I. Zobotin, V.N. Ilyushchenko, G.Z. Kir'yukov (Deputy Resp. Ed.), M.T. Kozlovskiy, (Resp. Ed.) and L.B. Shalabyukov.

PURPOSE: This book is intended for scientists and engineers in the electrochemical and nonferrous metal industries.

COVERAGE: This collection contains 14 reports by the Laboratories for Analytical Chemistry and Electrochemistry attached to the Institute of Chemical Sciences, Academy of Sciences, Kazakhstan Republic. The amalgam method of obtaining thallium from lead powder, the electrolysis of sulfate solutions of zinc and the impoverishment of waste slag during nickel production are described. The majority of articles have a practical nature and deal with problems of developing and perfecting new electrochemical methods for the production of

Card 1/4 non-ferrous metals.

AVAILABLE: Library of Congress

TM/mas

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KIR'YAKOV, G.Z.; BAYNIYETOVA, F.K.; VAKHIDOV, R.S.

Effect of manganese on the electrodeposition of zinc. Trudy Inst. khim. nauk AN Kazakh. SSR 3:72-81 '58. (MIRA 12:3)
(Zinc) (Electroplating) (Manganese)

VAKHIDOV, R.S.; KIR'YAKOV, G.Z.

Electrodeposition of cadmium at high current densities. Trudy Inst. khim. nauk AN Kazakh. SSR. 3:82-86 '58. (MIRA 12:3)
(Cadmium) (Electroplating)

VAKHIDOV, R.S.; KIR'YAKOV, G.Z.

Corrosion of zinc in a sulfuric acid - zinc electrolyte containing manganese dioxide. Izv.AN Kazakh.SSR.Ser.khim. no.1:44-46 '59. (MIRA 13:6)

(Zinc--Corrosion)
(Manganese oxide)
(Sulfuric acid)

KIR'YAKOV, G.Z.; VAKHIDOV, R.S.

Corrosion of zinc in a zinc sulfate electrolyte in the presence of permanganate ions. Izv.AN Kazakh.SSR.Ser.khim. no.2:14-17 '59. (MIRA 12:8)

(Zinc--Corrosion)

5(1,2)

AUTHORS: Vakhidov, R. S., Kir'yakov, G. Z. SOV/153-2-2-18/31

TITLE: The Rôle of Manganese in the Electroseparation of Zinc (O roli margantsa pri elektroosazhdenii tsinka)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 238 - 243 (USSR)

ABSTRACT: Up to now no uniform opinion has been achieved regarding the rôle of manganese as mentioned in the title. The authors see the main reason for this in the fact that most investigations took place without a separation of the anodic and cathodic space. For this reason manganese compounds of various degrees of oxidation and in different quantitative relations were present in the electrolyte, all at the same time. This resulted from the conditions and from the kind of the electrolytic procedure. Other admixtures are also apt to impair the character of manganese. In the present article the authors had the aim of explaining the effect of the different valence states of manganese on the zinc separation, conditioned by the current, as well as by the effect on the quality of the cathodic zinc sediment in the pure, so-called "standard" electrolytes at different current densities and temperatures. Figure 1 shows the dependence of the zinc separation and of the cathode potential upon

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the Mn^{2+} concentration. Figure 2 illustrates the same in its dependence upon the MnO_2 content in the electrolyte. The same is shown in figure 4 in its dependence upon $KMnO_4$. Figure 5 gives the dependence of the potential of a zinc cathode upon the $KMnO_4$ content in the electrolyte. Figure 6 shows the influence of the temperature on the zinc separation, conditioned by the current in the presence of different $KMnO_4$ amounts. On the basis of the results obtained, the authors draw the following conclusions: 1. Manganese may be present in a zinc electrolyte as bivalent ions, as dioxide and as permanganate ions. 2. Even in large quantities, ions of bivalent manganese have only little effect on the zinc separation, reducing it slightly. 3. In quantities of 1 to 3g/l, manganese dioxide considerably reduces the zinc separation, but improves the quality of the zinc sediment (Fig 3). 4. Permanganate ions have the worst influence. At high temperatures and low current densities, the zinc separation is reduced by dozens of percents, or even down to nil in the presence of permanganate. In our case the quality of the sediment is influenced by manganese dioxide. There are 6 figures

The Rôle of Manganese in the Electroseparation of Zinc SOV/153-2-2-18/31

and 26 references, 24 of which are Soviet.

ASSOCIATION: Institut khimicheskikh nauk AN KazSSR (Institute of Chemical Sciences of the AS Kazakh SSR)

SUBMITTED: January 27, 1958

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VAKHIDOV, R.S.; KIR'YAKOV, G.Z.

Influence of manganese compounds on the electrodeposition of zinc in the presence of other impurities. Izv. AN Kazakh. SSR Ser. khim. no. 2:50-60 '60. (MIRA 14:5)
(Zinc plating)

VAKHIDOV, R.S.; KIR'YAKOV, G.Z.

Role played by manganese in the electrodeposition of zinc.
Trudy Inst.khim.nauk AN Kazakh.SSR 6:94-104 '60. (MIRA 14:4)
(Zinc plating) (Manganese)

S/080/60/033/010/010/029
D216/D306

AUTHORS: Stender, V.V., Kiryakov, G.Z., and Vakhidov, R.S.

TITLE: The effect of manganese on the electrodeposition of zinc

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2238 - 2245

TEXT: In existing processes for producing zinc electrolytically where the c.d. does exceed 600 A/M^2, compounds of the higher oxides of manganese have little effect on the cathode. Much work is being done on electrolysis of $ZnSO_4$ solutions at very high c.d.s. This demands a high solution feed rate, and causes increased gassing at the cathode with consequent agitation of the electrolyte. It had already been found that Mn causes lower cathode current efficiencies, while the presence of permanganates causes depolarization at the cathode. The limiting concentration of Mn is 3 gr./l;

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The effect of manganese on ...

if it is higher, it produces a considerable reduction in current efficiency. The following processes are shown graphically in the article: The corrosion rate in gr./M^2·hr. plotted against the MnO_2 content of the electrolyte (gr./l) at 3 given temperatures; The corrosion rate of Zn in gr./M^2 · hr. plotted against $KMnO_4$ concentration at various temperatures: It is pointed out that the action of Mn compounds on the corrosion of Zn is determined by their surface activity and oxidizing properties. MnO_2 particles are absorbed on the surface of the zinc and react with Zn atoms to form unphased layers of the type ZnO_{ads}. The complex sorption layer both protects the Zn from solution in the acid and slows down the reaction of Zn with MnO_4' ions. Further shown are the relation of the current efficiency of Zn cathodes, and the cathode potential to Mn^{++} concentration in the electrolyte; the relation of current efficiency of Zn to MnO_2 content of the electrolyte; the current efficiency with MnO_2 present in the electrolyte together with Sb

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(0.15 mg/l.), Cu(0.5 mg/l), iron oxide (10 mg/l), Co(9 mg/l), MnO (1 gm/l), Na(2 gm/l), Cl (50 mg/l). Pb (bivalent saturated). On adding MnO_2 to the electrolyte the reduction of cathode efficiency diminishes steadily up to 1.0 mg/l, then changes very little. This is connected with absorption of MnO_2 on the zinc. The complex layer protects the Zn cathode from other impurities. It is concluded that the corrosion rate of zinc in standard zinc electrolyte is slowed down by the presence of 0.1 gm/l MnO_2; the presence of potassium permanganate encourages the corrosion of zinc in the standard electrolyte; manganous salts up to 20 gm/l have practically no effect on the electrodeposition of zinc; manganese dioxide in small amounts (less than 5 gm/l) has a beneficial effect when other impurities are present (Sb, Cu, Ni, Pb, etc.). MnO_2 in larger amounts lowers the current efficiency (by 4 - 5 %), but as a surface-active agent improves the quality of the zinc deposit; MnO_4^- ions are the most harmful in zinc electrodeposition. At high temperatures

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and low c.d. the current efficiency falls considerably in the presence of $KMnO_4$, but $KmnO_4$ in small amounts (0.3 - 0.5 gm/l) lowers the negative effect of impurity metal ions, it is hardly possible to exclude manganese compounds from hydrometallurgical processes. In the electrolytic bath Mn compounds do not occur in critical quantities to cause harmful effects in the electrodeposition; the end product is manganese dioxide which settles to the bottom of the bath as slimes. There are 8 figures and 48 references: 42 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: A.L. Marshall, Trans. Faraday Soc., 21, 297, 1925-26; D.M. Liddell, Handbook of Non-ferrous metallurgy, N.Y. Sec. Ed., 1945; V.C. King and M.E. McKinney, Canad. J. Chem., 37, 205, 1959; R.C. Rooney, Analyst., 84, 619, 1957.

SUBMITTED: March 24, 1960

VAKHIDOV, R. S., Cand Chem Sci -- On the ~~question~~ problem of the role ~~played by~~ of manganese ~~during~~ in the electrodeposition of zinc. Alma-Ata, 1961. (Min of Higher and Sec Spec Ed KSSR. Kazakh State U im S. M. Kirov) (KL, 8-61, 230)

S/081/62/000/002/064/107
B156/B101

AUTHORS: Vakhidov, R. S., Kir'yakov, G. Z.

TITLE: Is manganese necessary in hydrometallurgical methods of producing zinc?

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 368, abstract 2K139 (Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekhn. sb., no. 1(11), 1961, 56-58)

TEXT: The transformations of Mn taking place during electrolysis, and the effects of Mn compounds on the processes taking place at the cathode during the electrolytic precipitation of Zn from a solution of the following composition (Zn 60, H_2SO_4 100 g/l) are examined; temperature 20-70°C, $J_{cathode}$ 100-10,000 a/m^2. It is pointed out that it is hardly advisable to exclude Mn compounds entirely from methods of producing Zn, since MnO_2 has a good effect on the electrolytic precipitation of Zn; in electrolysis, however, the concentration of MnO_4^-, which is the compound exerting the worst effects on electrolysis, must be small. 9 references. [Abstracter's note: Complete translation.]

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VAKHIDOV, R.S.; KAPKAYEV, S.M.

Shaker for physicochemical studies. Zav. lab. 30 no.10:1285-1286 '64. (MIRA 18:4)

1. Kazakhskiy tekhnologicheskiy institut.

VAKHIDOV, S. N. Cand. Veterinary Sci.

Disserta ion: "Healing the Infected Wounds of Farm Animals with Preparations of Garlic."

23 Sept. 49

Moscow Veterinary Academy

VAKHIDOV, S. N.

Lecturer, Uzbek Agricultural Institute.

Use of antibiotics in treatment of wounds and injuries.

[illegible], A. F., LITVINENKO, A. N., Scientific Research Work in Agricultural Institutes of Higher Training, Moscow, 1951, Unclassified.

CHERKASOVA, A.V.; CHEPUROV, K.P.; VAKHIDOV, S.N.; SAMORODOV, N.M.; SHEVCHENKO, N.Kh.

Trichomoniasis in swine. Uzb. biol. zhur. no.2:38-42 '61. (MIRA 14:5)

1. Uzbekskiy sel'skokhozyaystvennyy institut imeni V.V.Kuybysheva.
(TRICHOMONIASIS) (SWINE--DISEASES)

STARODUBTSEV, S.V.; VAKHIDOV, Sh.; TSINOBER, L.I.

Sectorial distribution of luminescence centers in synthetic quartz. Kristalografiia 8 no.5:770-773 S-O '63. (MIRA 16:10)

1. Vsesoyuznyy naucnno-issledovatel'skiy institut p'yezoopticheskogo mineral'nogo syr'ya AN UzSSR.

30151
S/608/61/000/000/006/007
B108/B102

24.3500 (1137, 1138, 1395)

AUTHOR: Vakhidov, Sh. A.

TITLE: Gamma-induced thermoluminescence of quartz crystals between 100 and 370°K

SOURCE: Nekotoriye voprosy prikladnoy fiziki, 1961, 79 - 80

TEXT: The quenching of luminescence in irradiated quartz crystals is due to a superposition of several processes. In order to explain these one has to measure the temperature dependence of the luminescence of gamma-irradiated crystals at low temperatures. At temperatures of more than 100°C, quartz from different finding places show different curves of thermoluminescence. Measurements were made with quartz from Volyno (strongly colored), the Ferganskaya valley (colored), and from Pamir (nearly colorless). The specimens were cooled to - 196°C with liquid nitrogen. They were gamma-irradiated with Co^{60} for 20 minutes at a dose rate of 300,000 r/hr. Subsequently, the specimen in question was heated to +100°C at a constant rate of 2.6°C per minute. Besides the high-temperature maximum, luminescence showed also a low-temperature maximum

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Gamma-induced thermoluminescence...

which indicates the existence of a number of shallow trapping levels. It was found that specimens assuming a color under the action of gamma-irradiation emit a more intense radiation than the colorless specimens. This result is consistent with results of earlier work (Starodubtsev, S. V., Vakhidov, Sh., Trudy Tashkentskoy konferentsii po mirnomu ispol'zovaniyu atomnoy energii, t. I, Tshkent, AN UzSSR, 1961). There are 1 figure and 5 Soviet references.

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S/638/61/001/000/024/056
B104/B138

AUTHORS: Vakhidov, Sh. A., Starodubtsev, S. V.

TITLE: Phosphorescence of crystalline quartz under gamma irradiation

SOURCE: Tashkentskaya konferentsiya po mirnomv ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy, v. 1. Tashkent, 1961, 171 - 174

TEXT: On crystalline quartz from Pamir, Volynskaya oblast' (Volyn oblast') and from Ferganskaya dolina (Fergana valley) the authors studied the decay of phosphorescence excited by gamma rays, and the effect of electric treatment, heating, and ultraviolet light on phenomena connected with phosphorescence. They used a Co^{60} source with a radiation efficiency of 10^6 r/hr. The decay of phosphorescence does not follow an exponential law, and differs for quartzes of different origin. All gamma-irradiated quartz samples capable of coloration phosphoresced a few minutes after gamma irradiation. The more intensively blackened parts phosphoresced more strongly after gamma irradiation. Crystalline quartz plates were placed between carbon electrodes. Electric current (600 v,

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Phosphorescence of crystalline...

400 - 500°C) was passed along the principal optical axis for 10 hrs. After cooling to room temperature, the samples were irradiated for one hour. The phosphorescence of the crystal plates changed considerably. Irradiation of gamma-irradiated samples with ultraviolet light produced new phosphorescence in those crystals which had phosphoresced after gamma irradiation. In the electrically treated samples no phosphorescence was observed after irradiation with ultraviolet light. These results are explained according to V. L. Levshin (Izv. AN SSSR, ser. fiz. nauk, 2, 3, 1948, p. 277): The energy of absorbed radiation lifts electrons into the conductivity band. Electrons entering the conductivity band pass into their normal state due to emission of light or heat energy. They are partly trapped on shallow localization levels. They can be thermally excited on these levels, thus causing the second phosphorescence. In samples heated to 400°C, all electrons are localized on trapping levels. In the course of geological periods, electrons pass over to the valence band, making it impossible to produce phosphorescence on natural quartz by ultraviolet light. There are 4 figures and 9 references: 5 Soviet and 4 non-Soviet. The reference to the English-language publication reads as follows: Tutagami T. Proc. Phys. Soc. japan., 66, 20, 1938, p. 458.

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S/638/61/001/000/024/056
B104/B138

Phosphorescence of crystalline...

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute AS Uzbekskaya SSR)

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VAKHIDOV, SH. A.

9C

PHASE I BOOK EXPLOITATION SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye yadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

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The Effect of Nuclear Radiation (Cont.) SOV/6176

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

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The Effect of Nuclear Radiation (Cont.) SOV/6176

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L 2441-66 EWT(l)/EWP(e)/EWT(m)/EWP(i)/EWP(t)/EWP(b)/EWA(h)/EWA(l)
IJP(c) JD/GS/WH

ACCESSION NR: AT5023819 UR/0000/62/000/000/0362/0365

AUTHOR: Starodubtsev, S. V.; Vakhidov, Sh. A.

TITLE: Luminescence of crystalline quartz exposed to ultraviolet and gamma rays

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 362-365

TOPIC TAGS: thermoluminescence, quartz crystal, gamma irradiation, UV irradiation, color center, electron transition, electron energy level

ABSTRACT: In order to investigate the nature of the centers responsible for the color of quartz crystals and for the appearance of various thermoluminescence peaks, quartz wafers measuring 1 x 1 x 0.1 cm were exposed to Co^{60} gamma radiation (600 r/sec) at liquid nitrogen and room temperature; then, after being removed from the radiation field, cooled in liquid nitrogen, and left standing for 20-30 hr, they were illuminated with UV light. On the basis of the results obtained and findings of other authors, it is postulated that the thermoluminescence processes occurring in crystalline quartz subjected to ionizing radiation are related to electron transitions between various local states. An explanation

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ACCESSION NR: AT5023819

of the thermoluminescence process in terms of these transitions is offered. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 18Aug62 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 000 OTHER: 007

Silicon 27

Card 2/2 hd

ACCESSION NR: AP4013024 S/0166/63/000/006/0046/0050

AUTHORS: Starodubtsev, S. V.; Vakhidov, Sh. A.

TITLE: EPR spectra of gamma-irradiated germanium-doped quartz crystals

SOURCE: AN UzSSR. Seriya fiziko-matematicheskikh nauk, no. 6, 1963, 46-50

TOPIC TAGS: EPR spectrum, electron paramagnetic resonance, gamma ray, quartz crystal, germanium doped quartz crystal, germanium impurity, radiation defect, hyperfine structure, negative rhombohedron, positive rhombohedron, cobalt 60, paramagnetic center

ABSTRACT: The paramagnetic resonance method has been proved very successful in recent years for studying several defects and for discerning the connection between these defects and both impurities and crystalline peculiarities in quartz. The method employed by the present authors is that discussed by I. H. Anderson and I. A. Well (The Journal of Chemical Physics, v. 31, 1959, no. 2). It was found that after Ge-doped quartz crystals are exposed to gamma radiation specific peaks of electron paramagnetic resonance are formed. The samples were cut in plates (10 x 4 x 1 mm) from negative and positive rhombohedrons. After sectioning and polishing, the samples were exposed to gamma radiation from Co^{60} for 15 min, at a radiation

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ACCESSION NR: AP4013024

intensity of 590 roentgens/sec and either a temperature of 35C or in liquid nitrogen. Three peaks were observed. The second disappeared after 24-hour exposure of the plates to gamma rays or if the sample was held at 100C for 10 minutes. The authors suggest that the paramagnetic centers are unpaired electrons, localized at impurities of Ge surrounded by four atoms of oxygen and one compensating charge of an electron by a Na^+ or Li^+ ion. The hyperfine structure of the line appears because of interaction with spins of I=3/2 of Na^{23} or Li^7 nuclei. The authors conclude that the shape of the electron paramagnetic resonance lines is determined by Ge impurities. Since the second peak is observed in all pyramids of crystal growth, it is probably due to a defective state in which Ge occurs in interstitial sites. The specific spectra of elsctron paramagnetic resonance and the nature of luminescense of the different faces of growth confirm the view that the properties of quartz are sectorially distributed. Orig. art. has: 5 figures.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics AN UzSSR)

SUBMITTED: 09Aug63 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 009 OTHER: 002

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L 9966-65 EWT(m)/EWP(e)/EPF ... /EPF ... /EWP(b) Pq-4/Pr-4/Pu-4 SSD/ESD(c)/
AFWL/ASD(a ... /AS(mp) ...

AUTHOR: Starodubtsev, ...

TITLE: Influence of electrical treatment on the absorption spectrum of crystalline quartz

SOURCE: AN UzSSR. Institut yadernoy fiziki. Radiatsionnyye effekty v kondensirovannykh sredakh (Radiation effects in condensed media). Tashkent, Izd-vo Nauka UzSSR, 1964, 9-11

TOPIC TAGS: absorption spectrum, quartz, germanium impurity, germanium configuration, quartz crystal, electrical treatment

ABSTRACT: The purpose ... clarify the influence of germanium impurities ... activated by germanium impurities exhibit a new absorption band with a maximum in the region of ... when exposed to ionizing radiation. This absorption band originates on the pyramids of a positive ... and negative ... The results presented in Fig. 1 of the ... kinds of crystal were grown, one activated with germanium impurities and the other non-activated. The samples were in the form of 10 x 4 x 1 mm^3 chips. Electrical treatment was carried out with the aid of graphite and sodium chloride. The source of γ-rays was Co^{60} and samples were irradiated for 15 min. at 260 r/sec. It is clear from the figure that the maximum ... of electrical treatment, together with ... 1, 3

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ACCESSION NR: AT4046905

the maxima at 630, 465 and 215 mμ. It is concluded that germanium impurities, as well as alkali metals such as sodium [illegible] formation of color centers responsible for the [illegible]

[illegible]

ASS[illegible]

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ACCESSION NR: AT4046905

ENCLOSURE: 01

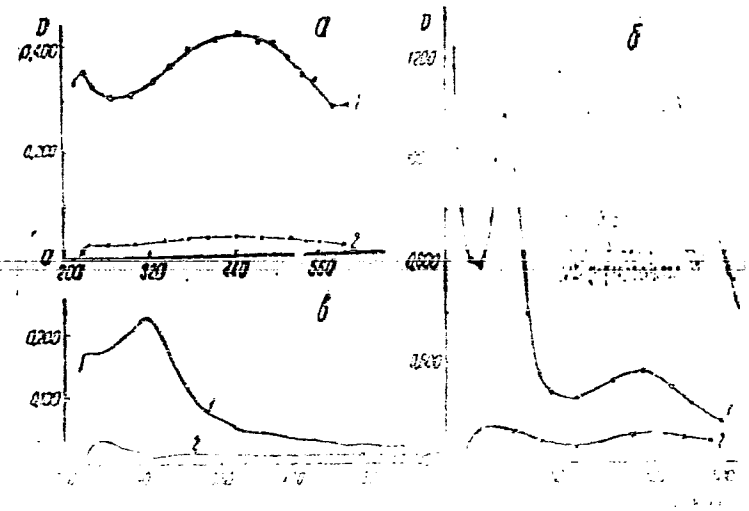

Fig. 1. Absorption spectra of crystalline quartz activated by germanium: a - natural crystal, b - synthetic crystal from a positive rhombohedron, c - crystal from a pinacoid. 1 - before electrical treatment; 2 - after treatment. (Abscissa = wavelength in mμ)

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L 43833-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/GG/WH

ACC NR: AP6030667 SOURCE CODE: UR/0166/66/000/004/0050/0052

AUTHOR: Vakhidov, Sh.; Ikramov, G.; Kaipov, B.

ORG: Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Some features of radiative centers in synthetic quartz activated with germanium

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1966, 50-52

TOPIC TAGS: impurity center, crystal lattice defect, activated crystal, irradiation damage, irradiation effect, QUARTZ CRYSTAL

ABSTRACT: Electron paramagnetic resonance (EPR) was used in an investigation of the radiative defects in crystalline quartz activated with impurities of germanium, aluminum, and some alkali metals. Specimens 1 x 4 x 10 mm were irradiated from a Co^{60} source at 380 r/sec. The irradiation temperature was varied from the boiling point of liquid nitrogen and up. During the measurement of the EPR spectrum the principal optical axis of the specimen was placed parallel to the direction of the magnetic field. The spectral lines were designated in the same manner as in a previous work by the author (Vakhidov, Sh.,

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ACC NR: AP6030667

Starodubtsev, S. V. "Izv. AN UzSSR," seriya fiz.-mat. nauk, 1963, no. 6). It was shown that at any irradiation dose, the EPR lines pertaining to Ge and Al impurities appear independently on the spectrum. Several tens of millions of roentgens are required to saturate the Griffiths-Owen-Ward (GOW) centers; smaller doses, of the order of several millions of roentgens, are required to saturate the 1 and 2 centers. The GOW and 1 and 2 centers were shown to appear as the result of irradiation and disappear, independently of each other, as the result of thermal or optical annealing. Investigation of the absorption spectra showed also that GOW and 1 and 2 centers exist independently from each other, have different probabilities of formation under the effect of ionizing radiation and can be annealed independently when heated or illuminated. Orig. art. has: 2 figures. [JA]

SUB CODE: 20/ SUBM DATE: 21Jul64/ ORIG REF: 002/ OTH REF: 003
ATD PRESS: 5073

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L 9254-66 EWT(l)/EWT(m)/T/EWP(t)/EWP(b)/EWA(m)-2/EWA(c) IJP(c) JD/JG/AT

ACC NR: AP5022719 SOURCE CODE: UR/0181/65/007/009/2759/2762

AUTHOR: Azizov, U. V.; Vakhidov, U. V.; Sultanov, V. M.; Sheynberg, B. N.; Shuppe, G. N.

ORG: Tashkent State University im. V. I. Lenin (Tashkentskiy gosudarstvennyy universitet)

TITLE: Emission properties of a molybdenum single crystal

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2759-2762

TOPIC TAGS: single crystal, molybdenum, work function, electron emission

ABSTRACT: Richardson lines were plotted for measuring the work function of electrons on the three main faces of a molybdenum single crystal: (110), (100) and (111). In addition to this, the work function of surface (111) was measured during vaporized deposition of barium on this face. The methods used in preparation of the specimens and making the measurements are described. The equipment is described in other papers. Curves are given for $\ln I/T^2$ as a function of T^{-1} for the three faces studied. The data obtained from these curves are used for calculating the work functions and Richardson constants (see table)

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ACC NR: AP5022719

TABLE

Face	ϕ, ev	$A_0(1-r)$, a/deg^2·cm^2
(110)	5.10 ± 0.05	270 ± 20
(100)	4.40 ± 0.05	230 ± 20
(111)	4.15 ± 0.05	140 ± 20

The method and formulas used for calculating the Richardson constants are described. It was found that the Ba-Mo(III) cathode current is directly proportional to the barium concentration. The work function in this case was found to be 2.30 ± 0.1 ev, while the effective Richardson constant was 60 a/deg^2·cm^2. Data from desorption curves show that the mean heat of adsorption for barium on surface (111) of molybdenum is 3.90-4.00 ev. The results indicate that the contrast in the work function is nearly as great in a molybdenum crystal as in tungsten: $\Delta\phi = \phi_{max} - \phi_{min} \approx 1$ ev. Orig. art. has: 5 figures, 1 table.

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