"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

DAVITAYA, I.P., professor; KHOCHOLAVA, K.M.

Intracerebral pneumocephalus. Vop.neirokhir. 20 no.2:55-57 Mr-Ap '56. (MLRA 9:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki lechebnogo fakul'teta Tbilisskogo meditsinskogo instituta

(BRAIN, dis.
pneumocephalus caused by gunshot wound of brain)
(WOUNDS AND INJURIES
gunshot wound of brain causing pneumocephalus)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

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NOSACH, Ye.G.; KHOCHOLAVA, V.N., inzh.

Phase registration of the disconnection of short-circuits by switches. Energetik 11 no.1:17-18 Ja '63. (MIRA 16:1)
(Electric power distribution) (Electric protection)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODA, V. (Odessa)

Coating the chassis with lacquer. Radio no.6:56 Je '57. (MLRA 10:7)
(Radio--Apparatus and supplies)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Khodak, A. I.

USSR/Pharmacology. Toxicology. Tranquilizers V

Abs Jour : Ref Zhur - Biol., No II, 1958, No 51905

Author : Galenko V. Ye. Khodaba A.I.
Inst : -
Title : Experimental Application of Serpasil in Psychiatric Diseases

Orig Pub : V. sb. Vopr. psikhiatrii, Vyp 2, M., 1957, 36-38

Abstract : No abstract

Card : 1/1

KHODAK, A. N

N/5
615.918
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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

Nomenklaturnyy spisok dereley oborudovaniya, podlezhashchikh plamennoy poverkhnostnoy zakalke (Classed List of Equipment Subject to Flaming Case Hardening, by) M. V. Naboka, P. I. Rodzevich, A. H. Khodak. Khar'kov, metallurgizdat, 1952.

71 p.

At head of title: Russia. Nauchnoissledovatel'skoye byuro organizatsiy proizvodstva chernoy metallurgii.

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, A.N.

RAYKO, V.V.nauchnyy sotrudnik; VOLKOV, Ya.R.nauchnyy sotrudnik; LEVITSKIY, D.A.nauchnyy sotrudnik; [redacted] nauchnyy sotrudnik; RATNER, Yu.Z. inzhener; VORODIMOV, N.I.inzhener; GRISHAYEV, N.N.inzhener; SHULYATSKIY, D.I., inzhener, redaktor; ANDREYEV, S.A., tekhnicheskiy redaktor

[Rules for the technical operation of cranes] Pravila tekhnicheskoi ekspluatatsii pod"emnykh kranov. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 167 p. (MIRA 10:5)

1. Russia (1923 U.S.S.R.) Ministerstvo chernoy metallurgii.
2. Vsesoiyznyy nauchno-issledovatel'skiy institut organizatsii chernoy metallurgii. (for Rayko, Volkov, Levitskiy, Khodak)
3. Otdel glavnogo mekhanika Ministerstva chernoy metallurgii. (for Shulyatskiy) 4. Zavod "Azovstal'". (for Ratner) 5. Zavod "Zaporozhstal'" (for Vorodimov, Grishayev)

(Cranes, derricks, etc.)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

RAYKO, V.V., nauchnyy sotrudnik; NIKBERG, I.M., nauchnyy sotrudnik; KHODAK, A.N., nauchnyy sotrudnik; NEVEDUSHCHIY, A.I., nauchnyy sotrudnik; VOLKOV, Ya.R., nauchnyy sotrudnik; PEYCHEV, G.P., otv. red.; IPATOV, P.P., red.; SHULYATSKIY, D.M., red.; BURKSER, L.D., red.; BALASEVICH, Yu.Yu., red.; SVETCHENKO, V.N., red.; KRYLOVSKIY, A.P., red.; SINYAVSKAYA, Ye.K., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Regulations for operating the mechanical equipment of rolling mills] Pravila tekhnicheskoi ekspluatatsii mekhanicheskogo oborudovaniia prokatnykh tsekhov. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 247 p. (MIRA 12:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii proizvodstva i truda chernoy metallurgii. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii proizvodstva i truda chernoy metallurgii (VNIIOChERMET) (for Rayko, Nikberg, Khodak, Nevedushchiy, Volkov). 3. Otdel glavnogo mekhanika byvshego Ministerstva chernoy metallurgii SSSR (for Ipatov, Shulyatskiy). 4. Zavod imeni Dzerzhinskogo (for Burkser, Balasevich). 5. Zavod imeni Kirova (for Svetchenko). 6. Zavod imeni Voroshilova (for Krylovskiy).
(Rolling mills--Equipment and supplies)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, A.S., (Bryansk).

Determination of small concentrations of ethyl alcohol. Apt.delo 2 no.2: 69-71 Mr-Ap '53. (MLRA 6:5)

(Alcohol, Denatured)

(CA 47 no.16:7949 '53)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Khodak, A. S.

Rapid method of detection of methyl alcohol in different materials. A. S. Khodak. *Apteknoe Delo* 4, No. 6, 30-3 (1955).—An app. is described by which the MeOH vapors of the boiling material are absorbed in either 2% $K_2Cr_2O_7$ in 25% H_2SO_4 or 3% $KMnO_4$ in 5% H_2SO_4 to be oxidized to HCHO. The latter is carried over to a soln. of a few grains of either morphine, codeine, or dionine in 2-3 cc. of H_2SO_4. In the presence of H_2O_2 a red-violet coloration changing to violet and forming a ring between the two liquids takes place. The limit of sensitivity is 0.2 cc./100 cc. In case of alc. or alc. fluids 2-10 cc. dild. to 50-100 cc. and in case of urine 100-200 cc. previously acidified with oxalic or tartaric acid are taken for analysis. In chem.-legal cases 100-200 g. of cadaver material crushed and worked into a paste with either acidified urine or distd. water are used.

A. S. Mirkin

CH

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, A.S.

Quantitative determination of small concentrations of ethyl alcohol in biological materials and pharmaceutical preparations. Apt.delo 6 no.1:42-45 Ja-F '57. (MLRA 10:3)

1. Iz byuro sudebno-meditsinskoy ekspertizy Bryanskoy oblasti (nachal'nik S.P.Zubkov)
(ETHYL ALCOHOL)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

BRODSKIY, I.I., inzh.; GNILENKO, B.A.; KRYUKOV, G.Ya.; MARSHAK, V.I.; KHODAK, I.Z.

Modernization of a continuous pipe-rolling mill. Mekh.i avtom. proizv. 14 no.1:24-26 Ja '60. (MIRA 13:5)
(Pipe mills)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, K. M.

KHODAK, K. M.: "The functional state of the higher portions of the central nervous system in various phases and in vario s clinical forms of rheumatism in children." Khar'kov Medical Inst. Khar'kov, 1956.
(Dissertation for the Degree of Candidate in Medical Sciences).

SO: Knizhnaya letopis', No 23, 1956.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

CA

Mechanism of the anodic overvoltage in the electrolysis of cryolite-alumina melts. S. I. Rempel and L. P. Khodak. *Doklady Akad. Nauk S.S.S.R.* 73, 821-8(1950).—The theories ascribing the high potential E of C anodes at high c.d., observed in the electrolysis of solns. of Al_2O_3 in fused Na_3AlF_6, to accumulation of O_2 to a high partial pressure (e.g. Pearson and Waddington, *C.A.* 43, 6074g) and, subsequent oxidation of the C anode by O_2 as a secondary, purely chem. (not electrochem.) process, are contradicted by oscillographic observations of the change of the anode potential E after interruption of the polarizing current. These detns. show potentials of well over 1 v. to persist for several sec.; the quantity of electricity discharged in a fall of E from 1.8 to 1.84 v. shows the amt. of electrochemically active O to be thousands of times the amt. calcd. for the gas phase.

With increasing c.d., E of a fresh nonpolarized C anode increases exponentially, whereas it remains practically const. for a long time when the c.d. is lowered from 0.7 to 0.3 amp./sq. cm. Thus, E cannot be detd. by the partial pressure of gaseous O_2. Inasmuch as C does interact chemically with O_2 (~ 950°), the C-O_2 electrode cannot be considered as a gas electrode analogous to the C-Cl_2 electrode where there is no chem. interaction between C and Cl_2. Under a const. c.d., oscillograms of E often show a max. In the light of the known facts on the combustion of C, the most probable effect of the discharge of oxygenated anions on C is the formation of intermediate C-O compds. at the surface of C. Bond regrouping processes in this surface compd are relatively slow, and the final stage is decompn. of the intermediate products and desorption of gaseous C oxides. At low c.d., discharge takes place at the most active points, where O is most strongly bound. Accordingly, at low c.d., the decompn. potential, 0.98 v., is very close to the reversible potential of $Al_2O_3 + 3C + 2Al + 3(O)$. With the discharge extending, at higher c.d., to a point of lower heat of adsorption, it will take place at increasingly higher potentials, and the more loosely held O ions will pass into the electrolyte at a higher E. It is the stability of the surface oxides formed at high c.d. and high E which accounts for the practical absence of a change of E on lowering the c.d. The slow process is the decompn. of the intermediate surface C—O compds., as is known from combustion of C. It is not the stage of discharge of anions and of formation of the adsorption complexes. V. Thon

1951

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.

4

Mechanism of the origin of overvoltage on a carbon anode in cryolite aluminum oxide melts. S. I. Rempel and L. P. Khodak. *Zhur. Priklad. Khim.* 26, 931-40(1953); cf. *C.A.* 43, 6519e.—A detailed discussion supported by many references to the work of others and to exptl. data obtained by the authors in this and previous publications are presented to refute the theory of Drossbach (*C.A.* 30, 4095[2]) and his "followers" that a C anode in an Al_2O_3 bath is a reversible O electrode. The specific capacity of the double layer on a "fresh" C electrode is 15-20 microfarads/sq. cm. During and after electrolysis it is appreciably greater. It is concluded that neither concd. polarization nor retardation of the discharge reaction are primary factors of appreciable overvoltage. The discharge of O-contg. ions on a C electrode results in the formation of "chemisorbable C-O complexes" and not free O. The low rate of decompn. of these complexes and the heterogeneity (energy) of the C surface cause the increase of the anodic potential with the increase in c.d., i.e. the primary cause of overvoltage on a C anode is the low rate of formation of gaseous C oxides from the complexes and their subsequent desorption from the surface of the anode.

I. Bencowitz

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. P.

USSR,

The Causes of [illegible] and its Connection with Current Efficiency. S. I. [illegible] Priklad Khim. 1954, 27, [illegible] [illegible] reply to criticism [illegible]

Electrometallurgy of Aluminium [illegible] Moscow 1953

Inst. Chem. + Metallurgy
Ural. Affil. AS USSR.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. P.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 27/48

Authors : Rempel', S. I.; Anisheva, N. A.; and Khodak, L. P.

Title : Comparison gas-electrode for measurements of cryolite-alumina fusions

Periodical : Dok. AN SSSR 97/5, 859-862, August 11, 1954

Abstract : The characteristics of various gas comparison-electrodes, used for the measurement of cryolite-alumina fusions, are analyzed. The oxygen-carbon electrode is considered to be the most stable comparison electrode and because of its high accuracy is best recommended for measurements of cryolite-alumina fusions. Means of securing composition constancy of the gaseous mixture surrounding the comparison electrode and to prevent anode gases from falling into the gas mixture, are described. Five USSR references (1944-1953). Graph; drawing.

Institution : Acad. of Sc. USSR, Ural Branch, Institute of Chemistry and Metallurgy

Presented by : Academician A. N. Frumkin, April 3, 1954

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. P.

3

With increasing c.d., E of a fresh [illegible] C anode [illegible] creases exponentially [illegible] for a long time [illegible]

[illegible] of the anodic overvoltage in the electrolysis [illegible] cryolite alumina melts [illegible] where there [illegible]

[illegible] the quantity of electricity discharge [illegible] of electrochemically active [illegible]

[illegible] oxides formed [illegible] the practical absence of a change [illegible] The slow process is the decomp[illegible] face C—O compl[illegible] is not the stage [illegible] adsorption complexes

1951

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.

SUSHKOV, Akim Ivanovich; TROITSKIY, Ivan Alekseyevich; EYDENZON, Moisey Aronovich; KHODAK, L.P., kand.tekhn.nauk, red.; IVANOV, A.I., inzh. red.; REMPEL', S.I., prof. doktor tekhn.nauk, red.; LUCHKO, Yu.V., red.izd-va; ZEF, Ye.M., tekhn.red.

[Metallurgy of light metals] Metallurgiia legkikh metallov. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1957. 510 p. (MIRA 11:2)
(Light metals--Metallurgy)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

SOV/137-58-12-24284

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 51 (USSR)

AUTHOR: Khodak, L. P.

TITLE: The Principle Underlying the Plotting of the Energy Balance of a Cell (K voprosu o printsipe postroyeniya energeticheskogo balansa elektrolizera)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1957, Nr 1, pp 139-143

ABSTRACT: A correlation of the processes proceeding in pyrometallurgical installations and electrolysis baths (EB) leads to the conclusion that it is impossible to apply the principle employed in compiling the heat balance of metallurgical furnaces (addition of exothermic processes within the installation to the balance) to that of EB energy balances. In the energy balance of an EB the major item of input is the energy of the electric current, while the major output items are the energy requirements for increasing the heat content of the flow of material passing through the EB (including that required for initial heating of the materials) and the energy required for the compensation of the heat loss into the ambient medium. Ye. Z.

Card 1/1

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

SOV/137-59-1-460

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 58 (USSR)

AUTHORS: Khodak, L. P., Rempel', S. I., Kuznetsov, S. I.

TITLE: On the Effect of Periodic Charging of Raw Materials on the Energy Balance in an Electrolytic Bath (O vliyanii periodicheskikh zagruzok syr'ya na energeticheskiy rezhim elektroliznoy vanny)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1957, Nr 1, pp 144-148

ABSTRACT: Utilizing the case of an Al bath as an example, the authors analyze the significance of the heat of dissolution of raw materials introduced into the bath in batches and the significance of an increase in electrical potential occurring in the bath during periods between charging on energy-balance equations for an electrolytic bath. In computing variations in heat content of a system undergoing an electrochemical reaction, e.g.: $Al_2O_3 + 1\text{-}1/2\,C \rightarrow 2Al + 1\text{-}1/2\,CO_2$, the right-hand side of the equation must show the Al_2O_3 in the form in which it is introduced into the bath rather than in the form of Al_2O_3 already dissolved in the electrolyte. In computing the energy balance, the alumina (A) must appear in the same form as that

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in which it appears in the material balance. An increase in the electrical potential of the bath, which occurs as the concentration of A in the electrolyte is reduced, results in the consumption of an additional quantity of electrical energy Q_g. If the increase in potential is brought about merely by a change in the concentration of A, then $Q_g = \Delta Z_p$, where ΔZ_p is the change in the isobaric-isothermal potential of the system. If other causes also are active, the magnitude of the ΔZ_p will be fully compensated by the electrical energy supplied externally. The magnitude of the Q_g will be the sum of two items: $Q_g = \Delta Z_p + Q'$, where Q' represents the additional quantity of electrical energy consumed in the bath as a result of an increase in the potential due to any causes aside from a change in the concentration of the A. Being a separate item on the input side of the energy-balance equation, the heat of dissolution of the raw material in the electrolyte must not be taken into consideration. A method permitting computation of the mean increase of potential in electrolyzers operating with raw material introduced periodically is given together with the computation of the mean value of the potential increase in an Al bath (this value being 0.105 v in said instance). In computing variations in the heat content of a system undergoing an electrochemical reaction the output side of the balance equation must be based on thermodynamic data for solid rather than dissolved A.

L. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.; REMPEL', S.I.; KUZNETSOV, S.I.

Energy balance of aluminum bath. Trudy Ural.politekh.inst., no.58:88-96 '57. (MIRA 11:4)
(Aluminum--Electrometallurgy)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. P.

3(5) PHASE I BOOK EXPLOITATION SOV/2154

Akademiya nauk SSSR. Vostochno-Sibirskiy filial

Syr'yevyye resursy lenkikh metallov Vostochnoy Sibiri, tom. 2(Light Metal Resources of Eastern Siberia, Vol 2) Moscow, 1958. 298 p. (Series: Its: Trudy, vyp. 13) 1,200 copies printed.

Editorial Board: N.S. Alekseyev, Ye. P. Bessolitsyn, V.S. Brachev, A.F. Li, Doctor of Geological and Mineral Sciences, and Ye. I. Khazanov (Resp. Ed.) Candidate of Technical Sciences; Ed. of Publishing House: V.K. Shlepov; Tech. Ed.: P.S. Kashina.

PURPOSE: This issue of the Eastern Siberian Branch Transactions is of interest to structural, exploration and mining geologists, mineralogists, and metallurgists in the light metal industries.

COVERAGE: This collection of articles is a compilation of the reports presented at the third coordinated conference on "The Creation of a Light Metals Industry in Eastern Siberia Based on Local Ores" organized by the Laboratory of Electrometallurgy of the Eastern Siberian Branch of the AN SSSR in October, 1956. It met for the purpose of promoting coordination between the activities of the power generation combines and the fast developing light metals industry of Eastern Siberia. The reports indicate that large aluminum and titanium-magnesium combines are being constructed in the Krasnoyarsk Kray and the Irkutsk Oblast. These areas provide the cheapest sources of coal and electrical energy. Individual articles also report on the following subjects: general questions in the development of the light metals industry in Eastern Siberia, sillimanite ores, nepheline syenites, bauxites, magnesium ores, etc. References accompany each article.

Avdeyeva, T.I. Decomposition of Nepheline Syenites by Nitrogen Oxides 178

Puzlov, A.V. Technological Processing Plans for Uzhurskiye Nepheline Rocks 185

PART III. BAUXITES AND THEIR UTILIZATION

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Orlova, P.V. Regularities in the Distribution of Bauxite Ores at the Boksonskoye Deposits 207

Khazanov, Ye. I., A.S. Bessonova, and A.F. Khlyupina. Combined Treatment of High Iron Content Silicified Bauxites by Sintering a Two-Component Charge in the Presence of a Reducing Agent 226

Ponomarev, V.D., and L.P. Ri. Sulfide-Caustic [Soda] Method of Processing Bauxites into Aluminum Oxide 232

Khodak, L.P., and A.I. Ivanov. Combined Treatment of Aluminum Oxide Iron Ores and High Iron Content Bauxites 237

Mal'tsev, V.S., and Ye.I. Khazanov. Study of the Reducibility of Bauxite Ore Components of the Tatarskoye Deposits 242

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PART IV. MAGNESIUM AND CALCIUM ORES AND THEIR UTILIZATION

Badalyayev, K.M. Onotskoye Deposits of Magnesite and Talc 265

Safonova, Ye.S., and Ye.I. Khazanov. Electrovacuum Method of Extracting Magnesium from the Magnesites of the Onotskoye Deposits 273

Matveyenko, I.I. Aluminum-Thermal Method of Obtaining Calcium from the Limestones of the Ust'-Anginskoye Deposits 286

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.; IVANOV, A.I.

Using blast furnace slags for the production of alumina. Trudy Inst. met. UFAN SSSR no.2:253-256 '58. (MIRA 12:4)
(Alumina) (Blast furnaces—By-products)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.; IVANOV, A.I.

Complex processing of alumina iron ores and high-iron bauxites. Trudy Vost.-Sib. fil. AN SSSR no.13:237-241 '58. (MIRA 12:12)

1. Ural'skiy filial AN SSSR.
(Iron ores)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK L. P.

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

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

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor; Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

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

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

Fomenko, A.S., T.M. Abramova and I.L. Gankina (Institut fizicheskoy khimii AN USSR-Institute of Physical Chemistry AS UkrSSR). Mechanism of the Corrosion of Iron, Magnesium, Zinc and Aluminum With the Aid of Heavy Oxygen Isotopes 299

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Mashovets, V.P., and A.A. Revaryan (Vsesoyuznyy alyuminiyevo-magniyevyy institut-All-Union Aluminum-Magnesium Institute). Mechanism of Anode Discharge During the Electrolysis of Molten Cryolite Clay 334

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

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KHODAK, L.P.; KUZNETSOV, S.I.; IVANOV, A.I.; SEMEBRENNIKOVA, O.V.; MOLEVA, N.G.

Obtaining alumina from blast furnace slags rich in the compound. Izv.Sib.otd.AN SSSR no.2:19-28 '59. (MIRA 12:7)
(Alumina) (Slag)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

MOLEVA, N.G.; IVANOV, A.I.; KHODAK, L.P.

Effect of the calcium oxide content on the structure and properties of easily crumbling aluminum-calcium slags. Izv. Sib. otd. AN SSSR no.8: 58-61 '59. (MIRA 13:2)

1. Ural'skiy filial AN SSSR.
(Slag)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.P.; VARLAMOVA, N.N.; KOZHEVNIKOV, G.N.

Extraction of alumina and alkali from sinters obtained in the reduction smelting of red muds. Izv. Sib. otd. AN SSSR no.7: 64-70 '62

1. Ural'skiy filial AN SSSR, Sverdlovsk.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

GRUZINOV, V.K., akademik; MIKHAYLOV, V.V., akademik; KHODAK, L.P., kand. tekhn.nauk; MIKHAYLOV, S.V.; RAKHIMOV, A.R.; NIKITIN, G.M.

Utilization of the brown ores of the Lisakov deposit. Vest. AN Kazakh. SSR 21 no.11:9-13 N '65. (MIRA 18:12)

1. Akademiya nauk Kazakhskoy SSR (for Gruzinov, Mikhaylov, V.V.).

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. Z.

4

The Influence of Coke Circulation on the Combustion Process in Blast Furnaces. I. P. Bardin, M. Ya. Ostroukhov, L. Z. Khodak and L. M. Tsylev. *Izvest. Akad. Nauk, SSSR, Otd. Tekh. Nauk*, 1955, (1), 80-90). [In Russian]. The combustion zone in front of tuyeres was investigated in four blast furnaces. The distributions of oxygen, carbon dioxide, carbon monoxide, temperatures, and static pressures along the radius in front of the tuyere nozzle were measured and samples of slag and metal were collected. On the basis of results obtained it is concluded that the combustion in a blast furnace takes place not in a layer of coke but in a stream of blast in which pieces of coke are suspended. Only the last stage of combustion, the reduction of carbon dioxide to carbon monoxide, takes place in the boundary layer of coke surrounding race ways.—V. O.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Khodak, L. Z.

Circular movement and burning of coke at the tuyère of a blast furnace. L. Z. Khodak. Trudy Sovershchaniya Inst. Met. Ural. Filiala Akad. Nauk S.S.S.R. i Magnitogorsk. Met. Kombinat., 1955, 276-8 (Pub. 1956).—The raceway in front of the tuyère of a blast furnace was studied by high-speed photography (cf. Elliot, et al., C.A. 46, 7010d) and the combustion was studied by gas analyses of samples taken at different positions of the burning vortex. The gas samples were withdrawn through thin tubing occupying 4-7% of the cross section of the tuyère. This does not interfere with the photography. The results are discussed.

L. R.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK L. Z.

Blast furnace practice with low-density ore charge. L. Khodak and Yu. A. Popov (Met. Plant, Chelyabinsk). [illegible] 17(1955).—The Chelyabinsk plant operates on brown Fe ores with Fe 47-49% and siderites carrying Fe 28-35%. When sinter is used, it contains Fe 44-45% and is both light and brittle. Av. burden consists of fine ore (0-10 mm.) 80-60, lump ore 10-15, sinter 35-40, and siderite up to 20%. Fines lead to an exceptionally high resistance to blast passage. Furnaces which run on 2.6-2.7:1 ore:coke ratio operate nonuniformly and have frequent slips, hanging, and heavy scaffolding in the middle of the shaft. Gases travel mostly on the periphery and deposit ore in the center, making it even more impermeable to the blast. Factors involved are examd. in detail.

J. D. Gat.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KLODAK, L.Z.

Novel Interpretations of the Combustion Process of Coke in the Blast Tuyeres of Furnaces. I. P. Hardin, L. M. Zyliew, M. J. Ostrouchow, and L. S. Chodak. (*Neue Hütte*, 1958, 1, Feb., 238-241). Recent investigations in the USSR, U.S.A. and Great Britain (Burns) are summarized. Deviations from "classical" theory are interpreted. Combustion in front of blasting tuyeres was found to occur not in a stationary layer of coke, but in a turbulent motion of coke particles. Coke combustion is characterized by chemical factors, i.e. kinetics, and by physical factors, dependent on the power of the jet. The extent of the combustion zone in the blast furnace has been shown to depend far more on the physics of the process than on combustion velocity. — L. J. L.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.Z.

18

1847. COMBUSTION PROCESS AT BLAST FURNACE TUYERES. Ostroukhov, M.Ya. and Khodak, L.Z. (Stal (Steel, Moscow), 1956, vol. 16, 867-872; abstr. in Chem. Abstr., 1957, vol. 51, 2493). By means of small water-cooled pipes occupying 4-7% of the tuyère opening and swivelling packing in the tuyère stock, samples of gases in the combustion area were obtained. Combustion takes place in a cavity made by the blast in the charge and surrounded by a compact layer of coke 100-200 mm thick. Stereoscopic high speed photography [illegible] this cavity from above is circulated by the blast in two planes. In the horizontal the blast [illegible] left of the tuyère plane along the cavity wall returning [illegible] in the vertical, which practically does not extend below the tuyère [illegible] in the plane of the tuyere. Distribution [illegible] from the tuyere. They [illegible]

[illegible] from the boundary line [illegible] measured with a platinum [illegible]

the latter [illegible] is only one of the factors.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

OSTROUKHOV, M.Ya., kandidat tekhnicheskikh nauk; KHODAK, L.Z.; LEBEDEV, V.V.

Cinematographic study of the process of coke burning. Priroda 45 no.7: 78-81 Jl '56. (MLRA 9:9)

1.Institut metallurgii imeni A.A.Baykova Akademii nauk SSSR, Moskva (for Khodak).2.Laboratoriya nauchno-prikladnoy fotografii kinematografii Akademii nauk SSSR, Moskva (for Lebedev).
(Coke) (Combustion) (Cinematography--Scientific applications)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. Z.

137-1958-2-2393

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 27 (USSR)

AUTHORS: Bardin, I.P., Tsylev, L.M., Ostroukhov, M.Ya., Khodak, L.Z.

TITLE: On the Process of Coke Combustion at the Tuyeres of a Blast Furnace (O protsesse goreniya koksa u furm domennoy pechi)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 2, pp 3-8

ABSTRACT: In 1954-55, in different regions of the Soviet Union, a study was made on six blast furnaces having effective volumes of 330--1386 m^3. Gas samples were taken along the axis and above and below tha axis of a tuyere. The diagram depicting the change in gas composition in the combustion zone differed markedly from the "classical diagram." From the path of the isorithmic lines for CO_2, CO, and O_2 in a vertical plane it was possible to establish the direction of the blast and the pattern of circulation of the coke particles. These experiments led to the conclusion that combustion of the coke does not occur in the bed layer but inside the blast. In addition, the focal combustion zone was found to be distributed along a spherical surface nearly at the boundary of the combustion zone. The length of the oxidation zone was determined basically by the kinetic energy of the blast and did not depend appreciably on other factors. G.Ch.

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1. Coke--Combustion 2. Blast furnaces--Applications

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHO OAK, L. Z.

18(4) PHASE I BOOK EXPLOITATION SOV/1896

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya (Metallurgy, Study of Metals, and Physicochemical Methods of Investigation) Moscow, Ind-vo AN SSSR, 308 p. (Series: Its: Trudy, vyp. 3) Errata slip inserted. 3,000 copies printed. 1958

Resp. Ed.: I.P. Bardin, Academician; Ed. of Publishing House: A.N. Chernov; Tech. Ed.: I.F. Kuznis.

PURPOSE: This book is of interest to researchers in metallurgy, as well as to the technical personnel of the metallurgical industry.

COVERAGE: This volume of the Trudy (Transactions) of the Institut metallurgii imeni A.A. Baykova (Metallurigical Institute im. A.A. Baykov) contains 31 studies on metallurgy, individual metals and alloys, and physicochemical methods of investigation. Some of the studies pertain to the reduction of titanomagnetites, the viscosity and other characteristics of blast furnace slag, dislocation in metals, cracking of metals due to corrosion, simultaneous

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solubility of metals at various temperatures, apparatus for measuring electrical resistance and for determining the melting point of alloys and metals, optical spectral analysis, quantitative determinations by the sublimation method, and aging of alloys. Each study is accompanied by references.

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Rezniczenko, V.A. Reducing Titanomagnetites by Means of Carbon Monoxide and Solid Carbon 3

Tsylev, L.M., N.L. Zhilo, and G.A. Sokolov. Viscosity of Natural Primary and Final Blast Furnace Slags of Cast and Conversion Iron 35

Radnova, A.V., N.L. Zhilo, and G.A. Sokolov. Effect of Phase Composition on the Physical Properties of Blast Furnace Slags 52

Gubin, G.V., and L.M. Tsylev. On the Reduction of Ore and Carbon Granules 63

Khodak, L.Z. Shape and Dimensions of the Combustion Zone in a Blast Furnace 69

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. Z.

18(0) PHASE I BOOK EXPLOITATION SOV/1728

Akademiya nauk SSSR. Institut metallurgii

Sovremennyye problemy metallurgii (Modern Problems in Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 640 p. 3,000 copies printed.

Resp. Ed.: A.N. Samarin, Corresponding Member, USSR Academy of Sciences; Eds. of Publishing House: V.S. Rzhevnikov, and A.N. Dernov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This book is intended for scientific and technical personnel in the field of metallurgy.

COVERAGE: This is a collection of articles on certain aspects of Soviet metallurgy. The book is dedicated to Academician Ivan Pavlovich Bardin on the occasion of his 75th birthday. The book is divided into seven parts. The first part consists of two articles presenting a brief account of the biography and professional activity of the Soviet metallurgist. It includes an article by John Chipman, Nicholas Grant, and John Elliott (M.I.T., USA) describing their meeting with Bardin in Moscow and also his visit to the United States. The second part consists of three articles and deals with raw materials and fuels for the Soviet metallurgical industry. The third part represents the major portion of the book. It consists of 25 articles dealing with the various aspects of the metallurgy of pig iron and steel. The fourth part consists of two articles treating the metallurgy of nonferrous metals. The fifth part consists of three articles on the forming of metals. The sixth part consists of eight articles discussing certain aspects of physical metallurgy. The last part deals with general problems in the field of metallurgy. References are given after each article. No personalities are mentioned.

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Ostrovskiy, N.Ya., and L.Z. Khodak [Candidates of Technical Sciences, Metallurgical Institute imeni A.A. Baykov, AS USSR]. The Thermal Condition of the Hearth in Connection With the Investigation of the Combustion Process During Production of Ferrosilicon and Foundry Pig Iron 263

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L. Z., Candidate of Tech Sci (diss) -- "Processes occurring in the combustion zone of a blast furnace". Moscow, 1959. 26 pp (Acad Sci USSR, Inst of Metallurgy im A. A. Baykov), 150 copies (KL, No 21, 1959, 117)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

TSYLEV, Leonid Mikhaylovich; OSTROUKHOV, Mark Yakovlevich; KHODAK, Leonid Zalmanovich; ZINGER, S.L., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Process of coke combustion in blast furnaces] Protsess goreniia koksa v domennoi pechi. Moskva, Gos.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 98 p. (MIRA 13:5)

(Blast furnaces--Combustion) (Coke)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

BAZILEVICH, Sergey Vladimirovich; LAZAREV, Boris Leonidovich; STARIKOV, Modest Andreyevich; GOLOSKOV, Boris Viktorovich; KULIKOV, I.S., kand.tekhn.nauk, retsenzent; KHODAK, L.Z., red.; CHAPAYKINA, F.K., red.izd-va; MATLYUK, R.M., tekhn.red.

[Methods for experimental investigation of the blast-furnace process] Metody eksperimental'nogo issledovaniia domennogo protsessa. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Sverdlovskoe otd-nie, 1960. 254 p. (MIRA 14:3)

(Blast furnaces) (Cast iron--Metallurgy)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

OSTROUKHOV, M.Ya. (Chelyabinsk), KHODAK, L.Z. (Moskva)

Analysis of the coke combustion process in blast furnaces by furnace gas constitution diagrams. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:5-13 N - D '60. (MIRA 13:12)
(Blast furnaces--Combustion)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

S/133/60/000/012/015/015
A054/A027

AUTHORS: Dashevskiy, Ya.I., and Khodak, L.Z.

TITLE: All-Soviet Meeting of Furnacemen and Agglomeration Workers

PERIODICAL: Stal', 1960, No. 12, pp. 1156-1157

TEXT: The All-Soviet Meeting of Furnacemen and Agglomeration Workers convened by the State-Plan Committee of the Council of USSR Ministers, the State Scientific Research Committee of the Council of USSR Ministers and the Scientific-Technical Association of Iron and Steel Metallurgy was held in Magnitogorsk from 25 to 29 October 1960. All the Soviet metallurgical plants, scientific research institutes and planning bureaus were represented at the meeting. Presidential address was given by P.I. Korobov, Vice-President of the ГНТК (GNTK) of the USSR Council of Ministers and dealt with the present state of the blast furnace and agglomeration industry in the Soviet Union. The main topics of the section "ore-dressing and agglomeration" were: intensification of agglomeration and improving the quality of the agglomerate; application of heated and oxygen-enriched air in the agglomeration of iron ores; cooling the aggregates; introducing the most up-to-date types of agglomerating equipment; automation of agglomeration; developing pelletisation. Besides general remarks made to stress the need of improving enriching and agglomeration and more

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A054/A027

All-Soviet Meeting of Furnacemen and Agglomeration Workers

efficient machinery for these processes, it was proposed that: the upper limit of particle size of the agglomerated ore be lowered to 6-8 mm, that of fuel and fluxes for agglomeration to 1 mm; a uniform quality of ores and concentrates, fuels and fluxes be produced; the amount of lime in the agglomeration charge be raised to 4-5%; the process of lime calcination be intercalated in the agglomeration technology; the weight system be introduced in the dosage of the charge and all plants be supplied with the appropriate equipment between 1961 and 1963; the mixing of agglomerate charge be improved through two-stage mixing, the mixing drums extended, etc; the amount of air pumped through the agglomeration charge be increased to $100^3/m^2$ of agglomerate; the agglomerizing equipment be fed with two charges having different fuel contents in the beds; hot air and combined heating be applied during agglomerization; special cooling equipment be constructed for the production of agglomerization fuel from weakly agglomerizing coal and peat; the agglomerate be air-cooled by forced draft, two agglomerizing machines with automatic control be installed; high-capacity agglomerating machines be designed and constructed, new technological processes be established, etc. With regard to blast furnaces the following problems were discussed: theoretical and experimental investigation of the combined blasting method;

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All-Soviet Meeting of Furnacemen and Agglomeration Workers

experiments with high-capacity blast furnaces and their auxiliary equipment; mechanization and automation of blast furnaces and their auxiliary equipment. It was emphasized that the Soviet Union was the first in the whole world to apply natural gas and that the combination of natural gas and oxygen blasting had improved the technical-economical conditions and reduced the coke-consumption considerably. In order to extend the use of natural gas, it was held necessary to make high-capacity oxygen equipment (units of 35,000 m^3/hour capacity) at short notice. Another problem to be solved was the reconstruction of blast furnaces for operation at higher (1.5-1.8 atm) pressures. All new blast furnaces would have to be built for a volume of 2,000 m^3 or more, and must operate with a pressure of 2.5 atm in the charging hole, utilizing the energy of pressureized top gas in turbine-distributors. In order to increase the efficiency of natural gas, equipment should be designed which automatically maintains the constant proportion between blast and natural gas blown through and moreover, insures a uniform distribution of blast and gas through the tuyères. Practice shows that blast furnaces with a volume of 1,719 m^3 operate satisfactorily; it is, therefore, justified to increase the blast furnace volume further. Among several recommendations for improving the furnace construction

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All-Soviet Meeting of Furnacemen and Agglomeration Workers

it was suggested that the burners of the air-heating system be provided with fans having a capacity of 70,000-80,000 m^3/hour, valves constructed for the air heaters, capable of operating with the blast heated up to 1,200°C, at a pressure of 4.2 atm and equipment provided for mixing, sieving, weighing and loading the charge with the aid of vibrating screens, conveyors and stationary weighers. It was found that the present state of automatization of blast furnace operation was unsatisfactory. More attention should be paid in this respect to insuring a uniform quality of the charge and a high degree of stability of furnace operation. It was pointed out that the mechanization of heavy labor in the furnace chamber did not keep pace with the increase in furnace volume. A special institute for planning the mechanization of these operations was recommended. To improve labor conditions a number of proposals was made: special equipment for changing the tuyères and slag apparatus, remote-control of charge-feeding, delivery of the charge by conveyors, hydraulic dust removal from the bunker area, pneumatic transport of dust from the collectors. For the scientific research institutes the most important tasks are: to establish the optimum methods for utilizing reducing gases, liquid fuels and oxygen, the optimum heat conditions of blast and gas pressure in the charging hole, suitable basicity of the

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All-Soviet Meeting of Furnacemen and Agglomeration Workers

slag which would make it possible to melt low-sulphur irons. Methods should be established for desulphurization of iron outside the furnace and for refining the iron in the furnace chamber. Turbine distributors should be constructed for utilizing excess pressure and the excess furnace gas; methods should be invented to increase the useful life of the furnace installation, refractory material of longer useful life should be established, equipment for grading the agglomerate and coke into fractions before loading, equipment for processing the slag at the blast furnace with mechanical collection of the semi-finished product (without ladles) should be constructed.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.Z. (Moskva); MALYSHEVA, T.Ya. (Moskva)

Reduction and primary slag formation processes during the forced melting of ore and slag granules in shaft furnaces. Izv.AN SSSR. Otd.tekh.nauk. Met.i topl. no.4:10-19 Jl-Ag '62. (MIRA 15:8)
(Blast furnaces) (Metallurgical laboratories)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.Z.

Spread of combustion zones in blast furnaces. Trudy Inst. met. no.11:16-30 '62. (MIRA 16:5)

(Blast furnaces--Combustion)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

CHERNYSHEV, A.M.; GESS, B.A.; KANAVETS, P.I.; MELENT'YEV, P.N.; KHODAK, L.Z.; SOKOLOV, G.A.; BORISOV, Yu.I.; CHERNYKH, V.I.; Prinimali uchastiye: VAVILOV, N.S.; MAKARCHENKO, V.G.; KISELEV, G.P.; VOLNISTOVA, R.A.; MOREYEVA, G.R.

Testing granules made by the method of chemical catalysis in a laboratory shaft furnace. Trudy IGI 22:70-78 '63. (MIRA 16:11)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, L.Z.; MALYSHEVA, T.Ya.

Changes in phase composition and the mechanism of primary slag formation during the melting of ore-fuel granules. Trudy IGI 22:79-92 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

MALYSHEVA, T.Ya. (Moskva); KHODAK, L.Z. (Moskva)

Reduction and primary slag formation during the smelting of raw material prepared for blast fu- -e smelting. Izv. AN SSSR, Met. i gor. delo no.6:41-47 N-D '64. (MIRA 18:3)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

BORISOV, Yu.I. (Moskva); KHODAK, L.Z. (Moskva)

Certain regularities of the charge movement in blast furnaces. Izv. AN SSSR. Met. no.3:3-10 My-Je '65. (MIRA 18:7)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

BORISOV, Yu.I.; KHODAK, L.Z.

Mechanism of the flow of loose materials through an outlet. Inzh.-fiz. zhur. 8 no.6:712-719 Je '65. (MIRA 18:7)

1. Institut metallurgii imeni Baykova, Moskva.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

BORISOV, Yu.I. (Moskva); KHODAK, L.Z. (Moskva)

Mechanism of the descending of the charge into the combustion area of a blast furnace operating with a forced blow. Izv. AN SSSR. Met. no.6:8-13 N-D '65. (MIRA 19:1)

1. Submitted August 12, 1964.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, N.

MAKSIMUK, P.S.; KHODAK, N. [redacted]

Use of blowers for feeding carbon dioxide gas to saturators. Sakh. prom. 31 no.2:45-46 F '57. (MLRA 10:4)

1. Kupyanskiy sakharnyy zavod.
(Blowers) (Carbon dioxide) (Sugar machinery)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, P.A.; RUVINSKAYA, I.N., Blyuss, TS.M.

Utilizing spent alkali in the thylix process for gas purification. Gaz.prom. 4 no.8:17-18 Ag '59. (MIRA 12:11)
(Gorlovka--Gas purification)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, P.A.; VAS'KO, V.V.

Recovery of monoethanolamine after the purification of coke-oven gas. Khim. prom. no. 6:511 S '60. (MIRA 13:11)

1. Gorlovskiy azotno-tukovyy zavod.
(Ethanol) (Coke-oven gas)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, T. I.

(1)

Fuel Abst.
Vol. 15 No. 4
Apr. 1954
Natural Solid Fuels:
Winning

2693. INKP WINCH FOR SLOPING AND STEEPLY DIPPING SEAMS. Khodak, T.I. (Ugol (Coal), Oct. 1953, 37-39). A short illustrated description is given, with diagrams, of the gear drives and electrical connexions of a new winch for use with a coal cutter or cutter-loader. It is remote-controlled by the man operating the cutter. (L).

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, V.

Our present-day plans. Sil'. bud. 13 no.11:11-13 N '63. (MIRA 17:1)

1. Predsedatel' soveta Pogrebeshchenskoy mezhkolkhoznoy stroitel'noy organizatsii Vinnitskoy oblasti.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

5.3610

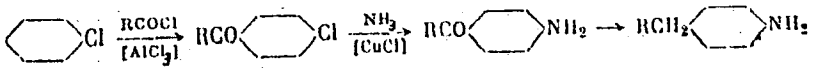
78304
SOV/79-30-3-58/69

AUTHORS: Nikolenko, L. N., Karpova, Ye. N., Khodak, V. A., Chirakadze, G. G., Borovik, V. P.

TITLE: Investigation of Aromatic Compounds With a Long Side Chain. III. Reduction of Alkyl 4-Aminophenyl Ketones According to Modified Kishner's Method

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 1028-1031 (USSR)

ABSTRACT: This is a continuation of the previous work (L. N. Nikolenko, K. K. Babiyevskiy, ZhOKh, 25, 2231, 1955) on preparation of aniline homologs according to the following scheme:



Card 1/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Investigation of Aromatic Compounds With a Long Side Chain. III. Reduction of Alkyl 4-Aminophenyl Ketones According to Modified Kishner's Method

78304
SOV/79-30-3-58/69

A series of alkyl 4-chlorophenyl ketones (see Table 1) was obtained by the condensation of aliphatic acid chlorides with chlorobenzene in the presence of $AlCl_3$. The reaction mixture was kept for 2 hr at 20-22° and 1 additional hr at 100°. The alkyl 4-aminophenyl ketones shown in Table 2 were obtained by ammonolysis of the corresponding alkyl 4-chlorophenyl ketones. 4-Alkylanilines shown in Table 3 were obtained by reduction of the corresponding alkyl 4-aminophenyl ketones with hydrazine hydrate according to the modified Kirshner method. There are 3 tables; and 9 references, 1 U.S., 3 U.K., 2 Japanese, 3 Soviet. The 4 U.S. and U.K. references are: E. Cline, E. Reid, J. Am. Chem. Soc., 49, 3152 (1927); G. Baddeley, J. Kenner, J. Chem. Soc., 303 (1935); W. J. Hickinbottom, A. C. Waine, J. Chem. Soc., 1558 (1930); W. J. Hickinbottom, J. Hickenbottom, J. Chem. Soc., 1119 (1937).

Card 2/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

78304, SOV/79-30-3-58/69

Table 1. Alkyl 4-chlorophenyl ketones p-$RCOC_6H_4Cl$.
Key: (a) Yield (%); (b) mp; (c) mp of 2,4-dinitrophenylhydrazone.

R	a	b	c
C_4H_9	80	32—32.5	175—175.3°
C_6H_{13}	94	64.5—65.5	150—151
C_8H_{17}	97	58—58.5	134—135
$C_{10}H_{21}$	98	46.5—47	103.5—104.5
$C_{11}H_{23}$	81	51.5—52	80.3—80.7
$C_{12}H_{31}$	91	69.5—70	100—100.6

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

78304, SOV/79-30-3-58/69

Table 2. Alkyl 4-aminophenyl ketones p-$RCOC_6H_4NH_2$.
Key: (a) Yield (%); (b) mp.

R	a	b
C_6H_{13}	95	90—90.5
C_8H_{17}	98	91—92
$C_{10}H_{21}$	98	101.5—102
$C_{13}H_{27}$	98	104—104.5
$C_{14}H_{29}$	95	102—102.5
$C_{15}H_{31}$	99	99—100

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

78304, SOV/79-30-3-58/69

Table 3. 4-Alkylanilines p-$RC_6H_4NH_2$. Key: (a) Yield (%); (b) bp (pressure in mm) and mp.

R	a	b
C_9H_{19}	80	194—196 (16)
$C_{11}H_{23}$	85	167—168 (3)
$C_{14}H_{29}$	98	mp 19.5—20 mp 44,5—45

Card 5/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Investigation of Aromatic Compounds With a Long Side Chain. III. Reduction of Alkyl 4-Aminophenyl Ketones According to Modified Kishner's Method

78304
SOV/79-30-3-58/69

ASSOCIATION: D. I. Mendeleyev Moscow Institute of Chemical Technology (Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva)

SUBMITTED: January 12, 1959

Card 6/6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, V.M., inzh.

Reduction of physical and mechanical indices of slabs to comparable values. Der. prom. 10 no.7:14 Jl '61. (MIRA 14:7)
(Hardboard—Testing)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

DRUZHININ, V.N.; FEDORISHCHEV, T.I.; KHODAK, V.M.; OSHURKOVA, I.K.

Use of hydrophobic additions obtained from turpentine industry wastes in the manufacture of particle boards. Der.prom. 11 no.1:25-26 Ja '62. (MIRA 15:1)

(Hardboard)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Bitumen stratification in Cambrian deposits in the Aldan District, Yakut A.S.S.R. Dokl.AN SSSR. 105 no.3:564-565 N '55. (MLRA 9:3)

1. Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.S. Shatskim.
(Aldan District--Bitumen)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, YU A.

USSR/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26560.

Author : ~~Khodak, Yu. A.~~
Inst : Lvov University.- Inst. Geol. Sci AS USSR, Moscow
Title : Secondary Alterations of Lower Cambrian Rocks in Aldanskiy Region of Yakut ASSR.

Orig Pub : Vopr. mineralogii osadoch. obrazovaniy. Kn. 3- 4, L'vovsk. un-t, 1956, 468 - 485.

Abstract : Some newly formed minerals were discovered at the study of alteration of sedimentary rocks, which have not been subject to the action of intrusions. Quartz and chalcedony were produced in the results of concentration of the original SiO_2 and of its transfer into the rock layers. Argillaceous minerals served as sources of K for the formation of felspars.

Card 1/3

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Y. A.

Secondary minerals in the lower Cambrian deposits of the Aldan region of the Yakutsk A. S. S. R.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu. A.

Alterations of Cambrian dolomitic rocks of the Aldan

intrusion was established. Tables of rock-analysis results substantiate the findings. Heating curves are shown for

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

Khodak, Yu.A.

USSR/ Geology

Card 1/1 Pub. 22 - 41/54

Authors : Khodak, Yu. A.

Title : Genesis of lower Cambrian dolomites of the Aldansk region of the Yakutsk-ASSR

Periodical : Dok. AN SSSR 106/2, 328-330, Jan 11, 1956

Abstract : Scientific data are presented on the genesis of lower Cambrian dolomites discovered in the Aldansk region of the Yakutsk ASSR. Thirteen references: 11 USSR; 1 French and 1 Eng. (1911-1955).

Institution : .....

Presented by: Academician N. M. Strakhov, October 23, 1955

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

On fluorite from Lower Cambrian rocks of the Aldan region of the Yakut ASSR. Dokl. AN SSSR 106 no.3:533-536 Ja '56. (MIRA 9:6)

1.Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.S.Shatskim.
(Aldan region--Fluorite)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.; MENYAYLOV, A.A., doktor geol.-mineral. nauk, otv. red.; SHLEPOV, V.K., red. izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Petrographic and mineralogic characteristics of lower Cambrian sediments in Aldan District] Petrografo-mineralogicheskaia kharakteristika nizhnekembriiskikh otlozhenii Aldanskogo raiona. Moskva, Izd-vo Akad. nauk SSSR, 1960. 116 p. (MIRA 14:5)

(Aldan District--Petrology)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.; SUN' SHU [Sun shu]

Main structures of northeastern China and the adjacent territory of the Soviet Far East. Izv.AN SSSR. Ser.geol.26 no.10:97-110 O '61. (MIRA 14:9)

1. Sovet po izucheniyu proizvoditel'nykh sil Gosudarstvennogo naucho-ekonomicheskogo soveta Soveta Ministrov SSSR, Moskva.
(China--Geology, Structural)
(Soviet Far East--Geology, Structural)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.; CHEOBOTAREV, M.V.

Genesis of Sinaean magnesite rocks in the Lesser Khingan Mountains. Dokl.AN SSSR 138 no.1:184-187 My-Je '61. (MIRA 14:4)

1. Sovet po izucheniyu proizvoditel'nykh sil AN SSSR i Dal'nevostochnoye geologicheskoye upravleniye. Predstavleno akademikom D.S.Korzhinskim.
(Lesser Khingan Mountains--Magnesite)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Sequence and age of ancient formations in the Soviet Far East and adjacent regions of North China. Sov.geol. 4 no.12:96-106 D '61. (MIRA 15:2)

1. Akademiya nauk SSSR.
(Soviet Far East—Geology, Stratigraphic)
(China—Geology, Stratigraphic)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

ACCESSION NR: AP4009628 S/0293/63/001/003/0460/0464

AUTHOR: Khodak, Yu. A.; Kozlov, V. V.; Tomson, I. N.; Khoroshilov, L. V.

TITLE: Significance of geographic and geological methods in lunar studies

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 3, 1963, 460-464

TOPIC TAGS: lunar research, lunar geological study, lunar geographic study, lunar structure, lunar relief, lunar history, meteorite lunar theory, astronomy, moon

ABSTRACT: The report offers a brief review of lunar research to date, clarifies the significance of geographic and geological methods for future studies of lunar structure and relief, proposes close coordination of such methods (giving consideration to comparative terrestrial material) with astronomical methods, evaluates various studies of geographic and geological aspects completed thus far, and discusses the meteorite approach to an explanation of the evolution of lunar structure and relief. It is suggested that it will be impossible to clarify the origin of lunar structures and relief, or their pattern of distribution, without the participation of geologists, nor will it be feasible to compile adequate topographic, geographic or selenological-geological charts or diagrams. "The authors acknowledge the contribution of Dr. A. G. Masevich in posing the problem". Orig. art.

Card 1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

ACCESSION NR: AP4009628

has: no graphics.

ASSOCIATION: none

SUBMITTED: 09May63 DATE ACQ: 30Jan64 ENCL: 00

SUB CODE: AS NO REF SOV: 019 OTHER: 039

Card 2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

ACCESSION NR: AP4009629 S/0293/63/001/003/0465/0471

AUTHOR: Khodak, Yu. A.

TITLE: The most important structural elements of the Moon

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 3, 1963, 465-471

TOPIC TAGS: moon, moon strutural elements, lunar topography, albedo, lunar albedo, lunar relief, moon map

ABSTRACT: The character and location of lunar topographic features are analyzed to trace the principal structural elements of the Moon. Recent photographs, maps, and other data on lunar relief are employed. The paper focuses on three fundamental structural elements said by the author to have been formed about 300 million years ago: 1) a meridionally extended ancient massif embracing the western portion of the far side and the southern portion of the visible side; 2) the Great Belt of large depressions (seas) located within the massif and extending convexly in the form of a semi-circle to the north pole from the South Sea to the Sea of Moisture; 3) the meridional belt of large depressions of the far side of the Moon, located on the edge of an uncharted lunar area. Within these, it is possible to

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

ACCESSION NR: AP4009529

trace the evolution of blocs limited by a system of global depth fractures extending in four directions for thousands of kilometers: meridional, submeridional, latitudinal, and sublatitudinal. The geophysical significance of these fractures (breaks) is discussed, and the most ancient systems are traced in detail. The author states that approximately 100-150 million years ago the Moon had to a large degree inherited its ancient structural plan; the central meridional zone of fractures of the southern hemisphere was the most mobile, while the far side was fairly stable. In succeeding periods a further differentiation of structural elements along the depth fault zones created the present enormous blocs. A demonstration of this hypothesis is given. The author cites the evidence of A. V. Peyve ("Struktura zemnoy kory i deformatsii gornykh porod," Izd-vo AN SSSR, 1960, 67) and G. N. Katterfel'd (Izv. Vses. geogr. o-va, v. 91, no. 272, 1952) on the existence of a bloc structure on the Earth and Mars as reason for investigating the possibility of a general law operative in the development of a hard core in these bodies. "The author wishes to express his gratitude to Doctor of Physics and Mathematics A. G. Masevich for her help in conducting the studies." Original article has: 2 figures.

Card 2/5

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Principal structural elements of the moon and the geographical and geological methods of studying them. Izv. Kom. po fiz. plan. no.4:10-23 Ag '63. (MIRA 18:5)

1. Laboratoriya osadochnykh poleznykh iskopayemykh Gosudarstvennogo geologicheskogo komiteta SSSR.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Geological of the Lesser Khingan Mountains and its position in the structure of the Far East. Sov. geol. 6 no.6:20-31 Je '63. (MIRA 16:7)

1. Laboratoriya osadochnykh poleznykh iskopayemykh AN SSSR.
(Khingan Mountains—Geology, Structural)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Main structural elements of the moon and the importance of geographical and geological methods in lunar explorations. Izv. AN SSSR.Ser. geol. 28 no.8:11-22 Ag '63. (MIRA 17:2)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.; CHEBOTAREV, M.V.

Ancient formations in the Amur Valley. Sov. geol. 7 no.1: 79-94 Ja '64. (MIRA 17:6)

1. Dal'nevostochnoye geologicheskoye upravleniye i Laboratoriya osadochnykh poleznykh iskopayemykh Gosudarstvennogo geologicheskogo komiteta SSSR.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAK, Yu.A.

Structural and genetic characteristics of the iron-manganese mineralization of the Karazhal type (central Kazakhstan). Trudy SNIIGGIMS no.35:218-227 '64. (MIRA 18:5)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

YEROSHCHEV-SHAK, V.A.; KHODAK, Yu.A.; GRIBOV, Ye.M.; SYNGAYEVSKIY, Ye.D.

Association of clay minerals in the Upper Famennian rocks and ores of the Dzhail'ma trough. Dokl. AN SSSR 164 no.4:906-909 O '65. (MIRA 18:10)

1. Laboratoriya osadochnykh poleznykh iskopayemykh AN SSSR. Submitted May 12, 1965.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

ACC NR: AR6035075 SOURCE CODE: UR/0169/66/000/008/G001/G001

AUTHOR: Khodak, Yu. A.

TITLE: Defining the main features of the structure and development of the Moon and their significance in the elucidation of principles of geological phenomena

SOURCE: Ref. zh. Geofizika, Abs. 8G1

REF SOURCE: Sb. Materialy k Soveshchaniyu Obshchiye zakonomern. geol. yavleniy, 1966, Vyp. 1. L., 1965, 197-202

TOPIC TAGS: moon, geology, selenography, earth, planet, map

ABSTRACT: In order to find the basic magnetic and block structure of the Earth, it is necessary to find the principles of the distribution of lunar ring structures and their connection with large and local blocks. The basic problem in the study of the structure of the Moon is the development of the stratigraphic scale of its formations. A structural-selenological map of the visible part of the Moon at a scale of 1:2,500,000 was compiled. Four structural strata are seen on the map. The areas of an emerging, mechanically eroded, ancient basement were noted. The

Card 1/2 UDC: 550.311

ACC NR: AR6035075
APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0"

study of the structure of the planetary body of the moon will help to determine the general planetary structure of the Earth as a planet. [Translation of abstract]

SUB CODE: 03, 08/

Card 2/2

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722120007-0

KHODAKIN, N. I.

Soshnikova, M. N. and N. I. Khodakin "The Aetiological Agent of a Peculiar Form of Encephalitis," Dok. AN, 47, No. 5, 1945. Mbr., Uzbek Inst. Microbiology & Epidemiology, Tashkent, -1944-049-.

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KHODAKOV, A.

A transformerless rectifier. Radio no.2:35 F '63. (MIRA 16:2)

(Electric current rectifiers)

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S/196/63/000/001/006/035
E193/E383

AUTHORS: Protsenko, P.I., Khodakov, A.A., Mirskaya, Ye.Z. and Venerovskaya, L.N.

TITLE: Physicochemical parameters of nitrites and nitrates of alkali and alkaline-earth metals with ferroelectric properties

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no. 1, 1963, 17, abstract 1 B55. (In collection: Segnetoelektriki (Ferroelectrics), Rostov-na-Donu, Rostovsk. un-t, 1961, 21-26)

TEXT: In connection with the possible application of ferroelectrics as nonlinear elements in conjunction with electroluminophors, it is desirable to have available ferroelectrics characterized by low ε, this property being necessary to ensure their compatibility with electroluminophors. With this in view, a study was conducted of crystals of those nitrites and nitrates of alkali and alkaline-earth metals that possess ferroelectric properties; the experimental specimens were crystallized out of aqueous solutions or grown by the Bridgman method from their melts. Thermal

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analysis of a large number of nitrates and nitrites enabled the authors to obtain more accurate data on their melting points, to establish the existence of polymorphic transformations and to determine the transformation temperatures (these data being reported in the form of a table). It was shown that single crystals of sodium nitrite ($NaNO_2$) in the direction of the β axis consituted ferroelectrics with $\theta \sim 437$ °K, i.e. 164 °C (see Fig. 1), the magnitude of ε at θ being more than 100 times higher than that at room temperature. The magnitude of spontaneous polarization, determined by pyroelectrical measurements, was found to be about 7 μk/cm. Typical hysteresis loops were observed at 413 °K (140 °C) at 50 c.p.s. High values of coercive fields at room temperature were established. A study of the dependence of ε of $NaNO_2$ on temperature and the intensity of the DC field E showed that ε decreased with increasing E at temperatures lower than θ, being independent of E at θ. Dilatometric measurements showed that the temperature coefficient of linear expansion α of $NaNO_2$ was of the order of 10^{-4} - 4×10^{-5} deg^{-1}, and that the temperature-dependence of α differed from that typical for ferroelectrics. A

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domain structure was observed which disappeared at temperatures higher than θ and was not restored on cooling below θ. Single crystals of sodium, rubidium, caesium and thallium nitrates had phase-transformations in the temperature range between room temperature and the melting point. The transformation of sodium nitrate from the second phase (with an orthorhombic structure of aragonite) to the first phase (with the calcite structure) took place on heating above 403 °K (130 °C); on cooling below 397 °K (124 °C) the first phase changed into ferroelectric third phase, which remained stable down to 383 °K (110 °C) and then changed to the second phase. The transformation of sodium nitrate to its ferroelectric phase was accompanied by a decrease in ε. Transformation from hexagonal to cubic modification took place at 434 °K (161 °C) in rubidium nitrate, a change from cubic to rhombic modification taking place at 492 °K (219 °C); a phase-transformation in this compound was observed also at 564 °K (291 °C). Rubidium nitrate had no ferroelectric properties in the temperature interval studied. A phase-transformation took place in caesium nitrate at 427 °K (154 °C) but no maxima were observed near the transformation temperature. Two phase-transformations were observed in thallium nitrate (see

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Fig. 2): $\gamma \rightarrow \beta$ transformation at 348 °K (75 °C) and $\beta \rightarrow \alpha$ transformation at 418 °K (145 °C). The increase in ε observed on heating thallium nitrate was attributed to the increase in conductivity. No ferroelectric properties were observed in barium nitrate, a $(Tl\text{-}Ba)NO_2$ complex and certain other nitrates. There are 5 figures and 3 references.

[Abstracter's note: Complete translation.]

CAPTION to Fig.1:

Temperature-dependence of ε and tan δ of $NaNO_2$ at f = 1 Mc/s

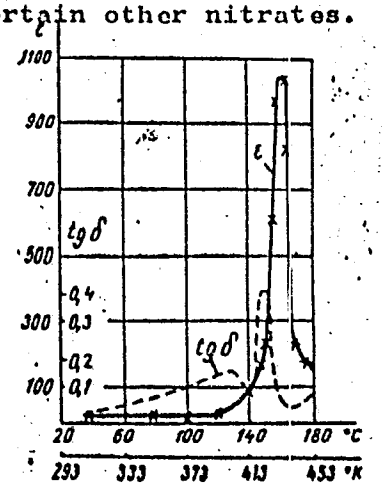

Fig. 1:

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S/019/61/000/024/031/088
A156/A126

AUTHORS: Sholokhovich, M.L.; Khodakov, A.L.

TITLE: Seignettoelectric monocrystals

PERIODICAL: Byulleten' izobreteniy, no. 24, 1961, 30

TEXT: Class 21g, 11_{02}. No. 143477 (688328/26 of December 8, 1960). Seignettoelectric monocrystals based on barium titanate, the distinctive feature of which consists in that for the purpose of increasing the nonlinearity of their characteristics and raising the rectangularity of their hysteresis loop, 1 - 2% barium hafnate is added to the barium titanate.

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L 15629-65 EWT(1)/EPA(s)-2/EWT(m)/EEC(t)/EWP(t)/[illegible]
ASD-[illegible]
ACCESSION NR: AR[illegible] S/0081/[illegible]

SOURCE: [illegible], Khimiya, Abs. 12B466

AUTHOR: Kramarov, [illegible]; Khodakov, A. L.; Sholokh[illegible], [illegible] Fesenko, Ye. G.

TITLE: Monocrystals of solid solutions of strontium and lead titanates

CITED SOURCE: Sb. Segnetoelektriki. Rostov-na-Donu, Rostovsk. un-t, 1961, 5-11

TOPIC TAGS: [illegible] solution, strontium, lead, [illegible] lead titanate, monocrystalline structure

TRANSLATION: The fusion diagram for the system K_2F_2--[illegible] has been stu[illegible] and the formati[illegible]n of a continuous [illegible] solutions [illegible] has been established. [illegible] positi[illegible] conductivity, a specially constructed dilatometer [illegible] permitted [illegible] in [illegible]

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transition temperature of 512° for monocrystals of $PbTiO_3$ was determined by the same method. The Curie point for monocrystals of solid solutions is close to the data known for polycrystalline samples. The refractive index for monocrystals $(Pb--Sr)TiO_3$ changes in a nonmonotonic fashion within the limits of 2.35 (for $SrTiO_3$) to 2.70 (for $PbTiO_3$).

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ACCESSION NR: AR4042161 S/0196/64/000/005/B019/B019

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5B83

AUTHOR: Lezgintseva, T. N.; Khodakov, A. L.

TITLE: Influence of slight impurities of iron on the dielectric properties of solid solutions of barium titanate and stannate

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vy*p. 51, 1963, 260-267

TOPIC TAGS: barium titanate, barium stannate, dielectic property solid solution

TRANSLATION: The dependence of ϵ on the intensity of a variable electric field E (up to 10 kv/cm), reversible ϵ (E varied up to 8 kv/cm) was studied at 300 kc, hysteresis loop and dependence on temperature of ϵ and tan δ at 300 kc from 20 to 140°C for ceramic solid solutions of $BaTiO_3$ - $BaSnO_3$ with 0; 3; 6; 9 and 12 mole % $BaSnO_3$ and 0; 0.1; 0.2; 0.4; 0.7; 1 mole % Fe_2O_3. Introduction of additions of Fe_2O_3 leads to a sharp lowering of the nonlinear properties of solid solutions; this is

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especially noticeably for compositions containing 6 mole % $BaSnO_3$. In solid solutions with additions of iron, θ shifts in the direction of low temperatures, the more noticeably, the higher the concentration of Fe, while ϵ is also lowered at θ. These effects are more noticeable in solid solutions baked directly from a mixture of $BaTiO_3$, $BaSnO_3$, and Fe_2O_3. The influence of Fe impurities on θ and ϵ in pure samples of $BaTiO_3$ is noticeably less than in solid solutions alloyed with the same concentration of Fe. For the manufacture of ferroelectric-ceramics and single crystals with the sharpest expressed nonlinear properties, it is proposed, to avoid materials containing Fe. Three illustrations. Bibliography: 4 references. [Rostov-on-Don State University]

SUB CODE: IC, EM ENCL: 00

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