KOZHEVNIKOV, A.V.

Obtaining gas turbine fuels from shale tar. Trudy VNIIPS no.5: 266-271 '56. (MLRA 10:5)

(Oil shales) (Gas turbines)

KOZHEVNIKOV, A.V.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels I-7

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2478

Author : Platonov, R.K., Kozhevnikov, A.V., Bituk, S.M.

Inst : All-Union Scientific Research Institute of Shale Processing

Title : Shale Distillation Mazut as Fuel for Ship Boiler Units.

Orig Pub : Tr. Vses. n.-i. in-ta po pererabotke slantsev, 1956, No 5, 281-288

Abstract : Results of laboratory studies of the properties of distillation mazut constituting a fraction of shale tar, boiling above 325°, and distilled in vacuum until a bitumen of given softening point is obtained in the residue. By its physico-chemical characteristics this mazut is equivalent to ship boiler mazut. In comparison with petroleum mazut

Card 1/2

Abs Jour : Ref Zhur -- Khimiya, No 1, 1958, 2478

the shale mazut is more readily separated from water and has a considerably lower solidification point and a more advantageous viscosity as a function of temperature.

AUTHORS: Kozhevnikov, A.V., and Bituk, S.M.

TITLE: Coking of heavy fractions of oil shale tar with alkaline additions. (Koksovaniye tyazhelykh fraktsiy slantsevoy smoly so shchelochnymi prisadkami). 65-6-8/13

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants) 1957, No.6, pp.48-54 (USSR).

ABSTRACT: Results of laboratory experiments on coking of heavy fractions of oil shale tar with additions of NaOH, KOH, CaO, Na_2CO_3 and Li_2CO_3 are given. The raw material consisted of a mixture of medium and heavy fractions (75% and 25% respectively) of tars obtained from gas producers in the Kokhtra-Yarve works. The characteristic feature of the tar was a high oxygen content - 6.5%, of which 3.3% was hydroxyl oxygen, the remaining 3.2% of oxygen - neutral of unknown structure. Experimental results are given in tables 1-9 and figs.1-2. It was established that on distillation up to coke of higher fractions of oil shale tar in the presence of alkali additions, the decomposition of all compounds with acid function takes place and the distillate produced is practically free from phenols. This can be taken as an indirect confirmation that oxygen containing compounds of the higher fractions of shale tar on thermal decomposition in

Coking of heavy fractions of oil shale tar with alkaline additions. (Cont.) 65-6-8/13

the presence of alkali behave like phenols, as the decomposition with the formation of CO_2 which is typical for carbinol compounds was not detected. Alkali additions cause a decrease of the temperature (in liquid) of the beginning of distillation on coking by 80 - 100 C in comparison with similar distillation without alkali additions. The distillate produced in the presence of alkali is lighter in respect of specific gravity and fractional composition. Gas produced (7% on raw material) on coking with alkali additions consist of 75-80% hydrogen, 15-20% methane, 2-3% olefins and practically does not contain H_2S, CO_2 and CO.

There are 9 tables and 2 figures.

ASSOCIATION: VNII PS.

AVAILABLE:
Card 2/2

KOZHEVNIKOV, Aleksandr Vasil'yevich

Tyazheloye zhidkoye toplivo dlya gazovykh turbin [Heavy liquid fuel for gas turbines] Leningrad, Gostoptekhizdat, 1958.
136 P. Diagrs., Graphs, Tables.
Includes bibliographies.

11(4) PHASE I BOOK EXPLOITATION SOV/1416

Kozhevnikov, Aleksandr Vasil'yevich

Tyazheloye zhidkoye toplivo dlya gazovykh turbin (Heavy Liquid Fuel for Gas Turbines) Leningrad, Gostoptekhizdat, 1958. 156 p. 2,800 copies printed.

Ed.: Kamenskaya, I.N.; Tech. Ed.: Yashchurzhinskaya, A.B.; Exec. Ed.: Dolmatov, P.S.

PURPOSE: This book is intended for scientists and engineers engaged in the production and use of fuels for gas turbines.

COVERAGE: The author gives an account of scientific principles governing the production and use of heavy liquid fuels for gas turbines and deals with a problem which is discussed in the Soviet literature for the first time. Possibilities of producing and using heavy fuels for gas turbines are analyzed with a consideration of the physico-chemical characteristics of petroleum produced in the Soviet Union, and of the experience gained in this field

Card 1/4

in foreign countries. This work may be helpful to constructors of gas turbines in determining the basic data on fuels necessary for designing combustion chambers and selecting the proper construction material. The author acknowledges the help of I.N. Kamenskaya, Candidate of Chemical Sciences, R.K. Platonov, Candidate of Chemical Sciences, B.A. Grebnev and G.V. Perlov, Candidate of Technical Sciences, in compiling the book. Bibliographic references accompany each chapter.

TABLE OF CONTENTS:

Heavy Liquid Fuel (Cont.) SOV/1416

AVAILABLE: Library of Congress

TM/atr
4-16-59

Card 4/4

KOZHEVNIKOV, A.V.

Coking higher cuts of the shale tar of semicoking. Khim. i tekh. gor. slan. i prod. ikh perer. no.8:117-138 '60. (MIRA 15:2)

(Coke industry)
(Oil shales)

KRYLOV, V.N.; TROTS, A.A.; KOZHEVNIKOV, A.V.; BITUK, S.M.

Production of calcium carbide, electrical carbon and graphitized articles from the coke of shale tar. Khim. i tekh. gor. slan. i prod. ikh perer. no.8:139-151 '60. (MIRA 15:2)
(Calcium carbide)
(Oil shales)

KOZHEVNIKOV, A.V.; PERVUNINSKAYA, N.A.

Bacteria in oil shales. Khim. i tekh. gor. slan. i prod. ikh perer. no.9:295 '60. (MIRA 15:6)

(Oil shales--Microbiology)

VOL'F, I.V.; KOZHEVNIKOV, A.V.; KORYSTIN, P.V.; YAROSH, P.P.

Simultaneous softening and deoxidation of water with a test filter under industrial conditions. Khim. i tekh. gor. slan. i prod. ikh perer. no.9:262-268 '60. (MIRA 15:6)
(Feed water purification)

KOZHEVNIKOV, A.V.

Methods for the calculation of the load of combined ionite and electron ion-exchange filters for the purification of steam condensate. Khim. i tekh. gor. slan. i prod. ikh perer. no.9: 269-275 '60. (MIRA 15:6)
(Ion exchange) (Filters and filtration)

KURZON, Ananiy Grigor'yevich, doktor tekhn.nauk, prof.; LITAVRIN, Oleg Grigor'yevich, inzh.; PETROV, Yevgeniy Valerianovich, inzh.; POTYAYEV, Vyacheslav Andreyevich, kand. tekhn.nauk; KHOROZYANTS, Aleksandr Georgiyevich, kand. tekhn nauk; CHERTKOV, Aleksandr L'vovich, Laureat Leninskoy premii; YUTKEVICH, Rostislav Mikhaylovich, inzh.; MOISEYEV, A.A., doktor tekhn.nauk, prof., retsenzent; MASLOV, A.A., kand. tekhn. nauk, dots., retsenzent; ZAYTSEV, Yu.I., kand. tekhn. nauk, retsenzant; KOZHEVNIKOV, A.V., kand. tekhn.nauk, retsenzent; GITEL'MAN, A.I., inzh., retsenzent; SMIRNOV, Yu.I., red.; TSAL, R.K., tekhn. red.

[Marine steam and gas turbines]Sudovye parovye i gazovye turbiny. Pod red. A.G.Kurzona. Leningrad, Sudpromgiz. Vol.2. [Systems and working principle of turbomachinery units] Sistemy i ustroistva turboagregatov. 1962. 419 p. (MIRA 15:11)

(Marine turbines)

KOZHEVNIKOV, A.V.; BITUK, S.M.

Repeated multiple coking of the higher fractions of shale tar. Khim. i tekh. gor. slan. i prod. ikh perer no.13:333-341 '64.

Coking of chamber oven shale tar and its high residual fractions obtained in vacuum distillation. Ibid.:342-348 (MIRA 18:9)

KOZHEVNIKOV, Aleksandr Vladimirovich; KUDRYASHEV, L.V., redaktor.

[In tundras, forests, steppes and deserts; sketches from the world of plant life] Po tundram, lesam, stepiam i pustyniam; ocherki iz zhizni rastitel'nogo mira. Izd. 2., pod red. i s dopolneniiami L.V. Kudriasheva. Moskva, Izd. Moskovskogo ob-va ispytatelei prirody, 1951. 200 p. (MLRA 6:9)
(Botany--Geographical distribution)

KOZHEVNIKOV, Aleksey Vasil'yevich; IVANOVA, G.A., redaktor; PROZOROVSKAYA, A.I., tekhnicheskiy redaktor.

[Trough tundra, forests, steppes and deserts] Po tundram, lesam, stepiam i pustyniam. Moskva, Gos. izd-vo detskoy lit-ry Ministerstva prosveshcheniia RSFSR, 1954. 181 p. (MLRA 8:5)
(Botany)

KOZHEVNIKOV, A. V.

USSR/Geophysics - Geology of Volga Region FD-1260

Card 1/1 : Pub. 129-22/25

Author : Pryakhini, A., and Kozhevnikov, A.

Title : Works of the Central Volga geological expedition

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 1, 147-148, Feb 1954

Abstract : Geological problems attendant upon the construction of the Krybyshev reservoir were studied in 1951-1953 by students of the Chair of Dynamic Geology (assistant head, Prof. O. K. Lange). This chair divided, after the removal to the new buildings on Lenin Hills, into two independent chairs; Chair of Dynamic Geology and Chair of Hydrogeology and Engineering Geology. This year the Geological Faculty has organized an expedition headed by Docent G. S. Zolotarev, Stalin prize winner.

Institution : --

Submitted : --

KOZHEVNIKOV, A. V.

N/5
722.5
K81

Po tundram, lesam, stepyam i pustynyam; ocherki iz zhizni rastitel'nogo mira (Through Tundra, Forests, Steppes, And Waste Lands) Moskva, Geografgiz, 1955.

191 p. illus., diagrs., map.

KOZHEVNIKOV, A.V.
Moscow Order of Lenin and Order of Labor Red Banner State U. imeni M.V. Lomonosov.

KOZHEVNIKOV, A.V.: "The structure of neogenic and Quaternary deposits and the geological history of the central course of the river Volga." Moscow Order of Lenin and Order of Labor Red Banner State U imeni M.V. Lomonosov. Moscow, 1956.
(Dissertation for the Degree of Candidate in Geologicomineralogical Sciences)

SO: Knizhnaya Letopis', No. 20, 1956

KOZHEVNIKOV A.V.

15-1957-3-2971D

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 78 (USSR)

AUTHOR: Kozhevnikov, A.V.

TITLE: Structure of the Neogene and Quaternary Rocks and the Geological History of the Region of the Central Course of the Volga River (Stroyeniye neogenovykh i chetvertichnykh otlozheniy i geologicheskaya istoriya oblasti srednego techeniya reki Volgi)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Geological and Mineralogical Sciences, presented to the MGU (Moscow State University), Moscow, 1956.

ASSOCIATION: MGU (Moscow State University), Moscow

Card 1/1

VELIKOVSKAYA, Ye.M.; KOZHEVNIKOV, A.V.

Origin of morainelike beds in valleys of the Terek, Gizel'don, and Urukh Rivers. Vest.Mosk.un.Ser. biol., pochv., geol., goeg. 14 no.4:125-134 '59. (MIRA 13:6)

1. Kafedra istoricheskoy i regional'noy geologii Moskovskogo universiteta.
(Terek Valley--Alluvium)

KOZHEVNIKOV, A.V.

Origin of surface loams in the Kuban Valley and adjacent watersheds. Biul.MOIP.Otd.geol. 34 no.4:172-173 Jl-Ag '59. (MIRA 13:8)
(Kuban--Clay)

VELIKOVSKAYA, Ye.M.; KOZHEVNIKOV, A.V.; FOMIN, V.I.

More about the "moraine" near TSebel'da. Vest. Mosk. un. Ser. 4: Geol. 15 no.4:14-20 Jl-Ag '60. (MIRA 13:10)

1. Kafedra istoricheskoy geologii Moskovskogo universiteta.
(Tsebel'da region--Moraines)

KOZHEVNIKOV, A.V.

New data on the geomorphology and structure of the Kuban Valley. Vest. Mosk. un. Ser. 4: Geol. 16 no.1:65-73 Ja-F '61. (MIRA 14:3)

1. Kafedra istoricheskoy i regional'noy geologii Moskovskogo universiteta.
(Kuban Valley—Geology, Structural)

KOZHEVNIKOV, A. V.

Lower boundary of the Quaternary, based on data obtained from the facies analysis of Akchagyl' and Apsheron sediments. Trudy Kom. chetv. per. 20:165-168 '62. (MIRA 16:1)

(Geology, Stratigraphic)

KOZHEVNIKOV, A.V.

Upper Pleistocene of the Teberda and Kuban Valleys. Biul.Kom. chetv.per. no.27:34-60 '62. (MIRA 16:4)
(Kuban Valley--Moraines)
(Kuban Valley--Terraces (Geology))

KOSHECHKOV, A.V.

Present developments of geomorphology and the latest tectonics of the Tyrnyauz and Rika interfluve (Transcaucasia). Vest.Mosk.un. Ser.5 Geog. 20 no.2:55-61 Mr-Ap '65. (MIRA 18:5)

1. Kafedra fizicheskoy geografii i geomorfologii Moskovskogo universiteta.

KOZHEVNIKOV, A. IA.

Additional remarks on the misinterpretation of A. IA. Kozhevnikov's theory of partial constant cerebral epilepsy; reply to Professor L. IA. Nemlikher. G. G. Sokolianskii, V. N. Kliuchikov. Zhur. nevr. i psikh. 53 no. 9:747 - 749 S '53

KONSTANTINOV, M.V.; KOZHEVNIKOV, B.A., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Manufacturing techniques for the production of cables with rubber insulation] Tekhnologiia proizvodstva kabel'nykh izdelii s rezinovoi isoliatsiei. Izd. 2-e, sovershenno perer. Moskva, Gos. energeticheskoe izd-vo, 1951. 384 p. (MLRA 8:2)
(Electric cables) (Electric insulators and insulation)

KOZHEVNIKOV, B.A.; RENNE, V.T., redaktor; VORONETSKAYA, L.V., tekhnicheskiy redaktor.

[Braiding of cables] Opletka kabel'nykh izdelii. Moskva, Gos. energ. izd-vo, 1953. 109 p. (MLRA 8:10)
(Electric cables)

KOZHEVNIKOV, B.A., kandidat tekhnicheskikh nauk.

"Electric cable." S.M. Bragin. Reviewed by B.A. Kozhevnikov. Elektrichestvo no.7:96-97 Jl '56. (MLRA 9:10)

1. Leningradskiy filial nauchno-issledovatel'skiy institut kabel'noy promyshlennosti Ministerstva elektropromyshlennosti.
(Electric cables)

KOZHEVNIKOV, B.A., kand. tekhn. nauk; POTAPOV, M.A., inzh.

Fine wire in glas insulation. Vest. elektroprom. 27 no.8:59-61 Ag '56. (MLRA 10:9)

1. Lenfilial nauchno-issledovatel'skogo instituta kabel'noy promyshlennosti.

(Electric wire)

KOZHEVNIKOV, B. F.

"Experimentally produced karyotypical isolation." Department of Genetics (Chief: Prof. N. P. Dubinin), Institute of Experimental Biology (Dir: academician N. K. Koltsov), Moscow. (p. 727) by Kozhevnikov, B. F.

SO: Biological Journal (Biologicheskii Zhurnal) Vol. V, 1936, No. 5

KOZHEVNIKOV, B. F.

"Experimental Analysis of the Non-Random Disjunction of Non-Homologous Chromosomes," Dokl. AN SSSR, 25, No.2, 1939

Cytogenetic Lab., Inst. Exptl. Biol., AS USSR

FA 36T75

USSR/Medicine - Chromosomes Nov 1947
Medicine - Flies

"Experimental Analysis of Preferable Separation of Nonhomologous and Homologous Chromosomes in Connection with Question of Natural Force Which Effects Separation of Chromosomes," B. F. Kozhevnikov, Moscow State University imeni M. V. Lomonosov, 4 pp

"Dok Ak Nauk" Vol LVIII, No 4

Author discusses the results of experiments which he conducted to observe the selective separation of two nonhomologous chromosomes of Drosophila melanogaster. He was also able to observe the selective division which goes on in the case of two homologous chromosomes. Briefly discusses his theories on the force

38T75

[redacted]

USSR/Medicine - Chromosomes (Contd) Nov 1947

which causes this selective division. Submitted by Academician I. I. Shmal'gauzen, 18 Apr 1947.

38T75

KOZHEVNIKOV, B. F. [redacted]

KOZHEVNIKOV, B. F.

FA 38T82

USSR/Medicine - Heredity Mechanism Nov 1947
Medicine - Flies

"Improved Chromosome Separation and Hypothesis of Electrical Charges," B. F. Kozhevnikov, Moscow State University imeni M. V. Lomonosov, 3 pp

"Dok Ak Nauk" Vol LVIII, No 9

Author conducted a series of experiments to study chromosome separation in Drosophila melanogaster. In order to explain the factors which he obtained, author had to present hypothesis that separation of chromosomes is brought about by electrical charges, which as a result of induction interchange in a circle. Similarly, chromosomes of one charge withdraw to one

[redacted] 38T82

USSR/Medicine - Heredity Mechanism (Contd) Nov 1947

pole. However, as yet, electrodynamic hypothesis has not been proven. Submitted by Academician I. I. Shmal'gauzen, 12 May 1947.

[redacted] 38T82

KOZHEVNIKOV, B.F. (Moskva).

"Study of the effect produced on the segregation in the F_2 hybrids of Antirrhinum by grafting F_1 hybrids of parental forms" [in German] by Martin Zacharias. Reviewed by B.F. Kozhevnikov. Bot. zhur. 43 no.1:125 Ja '58. (MIRA 11:2)

(Hybridization, Vegetable)
(Zacharias, Martin)

GALINKIN, B.Ye., kand.tekhn.nauk; BENDIN, A.S., inzh.; KOZHEVNIKOV, B.I., inzh.

Studying the surface roughness in the machining of compressed wood. Der.prom. 14 no.11:7-9 N '65.

(MIRA 18:11)

1. Voronezhskiy lesotekhnicheskiy institut.

KOZHEVNIKOV, B. T. (Engr)

KOZHEVNIKOV, B. T.(Engr) -- "Intial Industrial Practice of Students of Technological Machine Building Vuzes." Sub 12 Jun 52, Moscow Aviation Technological Inst. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

KOZHEVNIKOV, B.T., inzhener.

High-strength cast iron as a substitute for steel for cast parts of peat machines. Torf.prom. 32 no.8:21-22 '55. (MLRA 9:4)

1.Moskovskiy torfyanoy institut.
(Cast iron) (Peat machinery)

KOZHEVNIKOV, B.T., inzhener.

Using oxygen in the cupola furnace for producing wear-resistant cast-iron. Torf.prom.34 no.1:26-27 '57. (MLRA 10:2)

1. Moskovskiy torfyanoy institut.
(Cast-iron) (Oxygen)

KOZHEVNIKOV, B.T., inzh.

Comparative wear of steel and cast iron in a peat medium. Torf. prom. 36 no.2:19-22 '59. (MIRA 12:4)

1. Kiyevskiy torfyanoy institut.
(Steel--Testing) (Cast iron--Testing)

KOZHEVNIKOV, D.A.

USSR/ Miscellaneous - Dump trucks

Card 1/1 : Pub. 70 - 7/11

Authors : Kozhevnikov, D. A., Engineer

Title : Transportation of cement

Periodical : Mekh. stroi. 4, 20-22, Apr 1954

Abstract : The loading, transportation and unloading of ready-mixed cement, by cement carrying trucks TsS-1 and T-149, is described. Table, showing the technical characteristics of cement trucks, is included. Illustrations.

Institution : .....

Submitted : .....

KOZHEVNIKOV, D.A.

Study of the space and energy distribution of neutrons in a medium having a high hydrogen content. Trudy MINKHiGP no.25: 360-379 '59. (MIRA 15:5)
(Oil well logging, Radiation)

KOZHEVNIKOV, D.A.

Space and energy distribution of neutrons in highly hydrogenous media. Trudy MINKHiGP no.13:31-49 '60. (MIRA 13:11)
(Radioactive prospecting)

KOZHEVNIKOV, D.A.

Calculating the slowing-down length of neutrons in highly hydrogenous media. Trudy MINKHiGP no.31:50-63 '60. (MIRA 13:11)
(Radioactive prospecting)

KUZNETSOV, R. A., KANTOR, Boleslaw A., PENKIN, G. A., [illegible], I. G., and KOZHEVNIKOV, D. A.

"Some theoretical problems of neutron well-logging."

report to be submitted for the Conference on Nuclear Geophysics, Krakow, Poland, 24-30 Sept 1962.

GUBERMAN, Sh.A.; KOZHEVNIKOV, D.A.

Restoration of the true laws of field variation from integration characteristics. Izv. AN SSSR. Ser. geofiz. no.7:908-917 Jl '62. (MIRA 15:7)

1. Institut neftekhimicheskoy i gazovoy promyshlennosti imeni I.M.Gubkina.
(Field theory) (Prospecting--Geophysical methods)

KOZHEVNIKOV, D.A.

Temperature effects in neutron investigations of deep and ultradeep wells. Izv. AN SSSR. Ser. geofiz. no.12:1837-1841 D '63. (MIRA 17:1)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. I.M. Gubkina.

KOZHEVNIKOV, D.A.

Calculation of the neutron characteristics of rocks. Trudy MINKHiGP no.41:54-75 '63. (MIRA 16:10)

KOZHEVNIKOV, D.A.; KHAVKIN, V.S.; SHTEYNBREKHER, D.P.

Using the age approach to study regularities in the distribution of neutrons in rocks. Trudy MINKHiGP no.41:76-83 '63.
(MIRA 16:10)

L 10291-63 EPF(c)/EPF(n)-2/EWT(m)/BDS—AFFTC/ASD/ESD-3/AFWL/SSD—
Pr-4/Pu-4
ACCESSION NR: AP3002256 S/0089/63/014/006/0525/0529

AUTHOR: Kozhevnikov, D. A. 68 66

TITLE: Temperature dependence of diffusion characteristics of a moderator 19

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 525-529

TOPIC TAGS: neutron thermalization, diffusion length, diffusion coefficient, neutron moderator

ABSTRACT: Soviet and non-Soviet experimental data on the temperature dependence of the diffusion characteristics of water have been plotted on two graphs (one showing diffusion length versus temperature and the other, diffusion coefficient versus temperature) along with results calculated from existing empirical formulas. The experimental and theoretical curves were found to diverge, and at temperatures above 100C this divergence was considerably greater than the measuring error. Since existing experimental and theoretical data deal only with water, two general formulas applicable to water and a wide range of other moderators were derived (see Formulas 1 and 2 of Enclosure). The

Card 1/2

L 10291-63
ACCESSION NR: AP3002256

2

derivation is based on 1) application of the spherical harmonics method in the diffusion (P sub 1) approximation to the integral-differential transport equation and 2) integration with respect to angles and energies. In agreement with the experimental results of A. V. Antonov (Atomnaya energiya, v. 12, no. 1, 1962, 22), it is shown that for water the thermal neutron transport length is proportional to the velocity of the neutrons. An increase in the temperature of the thermal neutrons, combined with an increase in moderator temperature, results in a decrease in the moderation length of epithermal neutrons. The change in the spatial distribution of epithermal neutrons at high temperatures is shown to be associated with the change in moderator density. "I express my appreciation to A. V. Antonov and M. V. Kazarnovskiy for their valuable comments." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 15Aug62 DATE ACQ: 12Jul63 ENCL: 01

SUB CODE: 00 NO REF SOV: 005 OTHER: 009

Card 2/2

ACCESSION NR: AP4042258 S/0089/64/017/001/0034/0044

AUTHOR: Kozhevnikov, D. A.

TITLE: Space-energy distribution of neutrons in a homogeneous moderator

SOURCE: Atomnaya energiya, v. 17, no. 1, 1964, 34-44

TOPIC TAGS: neutron age, neutron attenuation, neutron moderator, neutron source, distribution function, neutron scattering

ABSTRACT: In view of the fact that the phase distribution of neutrons during the slowing down process (the Vick problem) was hitherto compared with the experimental data only by the method of moments, the author shows that a study of the slowing down of neutrons in a homogeneous medium of arbitrary isotopic composition by the method of spherical harmonics leads to an effective and relatively simple method of calculating the space-energy distribution of the neutrons.

Card 1/5

ACCESSION NR: AP4042258

This method yields an analytic solution in many cases of practical interest. The dependence of the mean free path of the neutrons on the lethargy is taken into account approximately. At small distances from the source, the distribution function is found to be independent of the order of approximation of the spherical-harmonic method, and agrees with the result of the age approximation, the limits of applicability of which is estimated more accurately than in the past. At large distances, the spatial dependence of the distribution function is determined completely by the spatial distribution of the primary neutrons, and the angular distribution and the energy spectrum of the slowed down neutrons do not depend on the coordinates. The connection of the method of spherical harmonics with the method of continuous fractions is indicated. The problem is solved under the assumption that no capture or neutron multiplication takes place during the slowing down process, that the neutron inelastic scattering cross section is negligibly small, and that the scattering of the neutrons from the target nuclei is spherically symmetrical in the c.m.s. The distribution of neutrons at small dis-

ACCESSION NR: AP4042258

tances and large distances is separately calculated. Special attention is paid to the slowing down of neutrons in water. The spatial distribution of indium neutrons in water is calculated for monoenergetic and polyenergetic sources. "I am deeply grateful to Ye. S. Kuznetsov and M. V. Maslennikov for valuable remarks, L. N. Yurova and A. A. Polyakov for providing the experimental data, S. A. Denisik and R. A. Rezvanov for providing the Monte-Carlo calculations, and to V. S. Khavkin for the numerical calculations and for help in the analysis and presentation of the results." Orig. art. has: 8 figures and 58 formulas.

ASSOCIATION: None

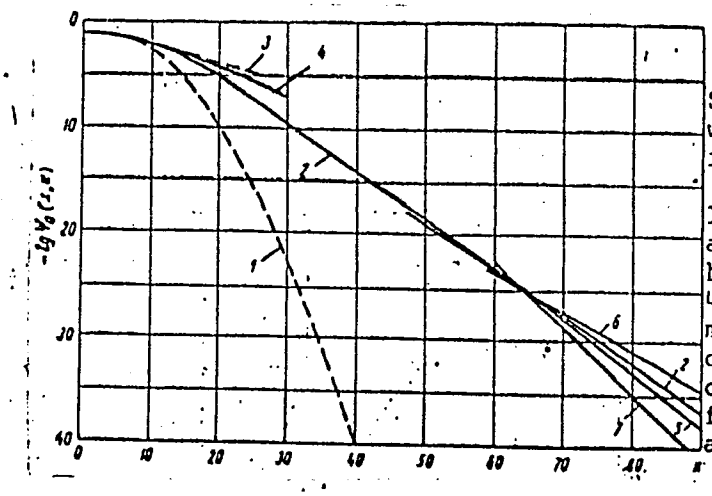
SUBMITTED: 21Nov63 ENCL: 02

SUB CODE: NP NR REF SOV: 017 OTHER: 022

Card 3/5

ACCESSION NR: AP4042258

ENCLOSURE: 01



Spatial distribution of neutrons with lethargy u - 10, slowed down in hydrogen

1 - age approximation, 2 - calculated in present work, 3 - calculated by synthetic nucleus method, 4, 5, - calculations by Vick's method for small and very large distances, respectively, 6 - calculated by Placek's asymptotic formula, 7 - calculation by Wigner's asymptotic formula

Card 4/5

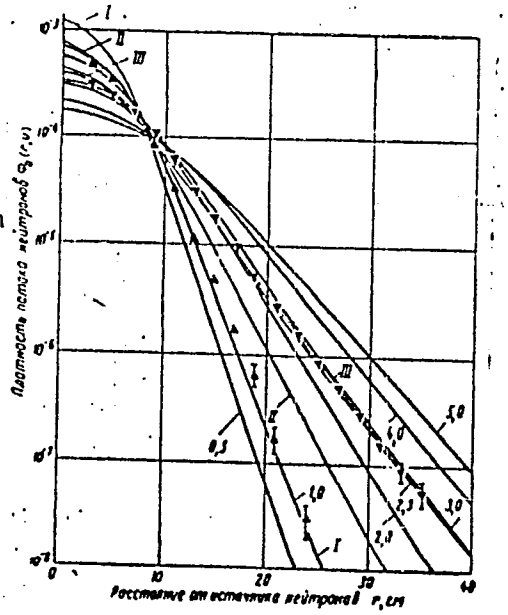
ACCESSION NR: AP4042258

ENCLOSURE: 02

Spatial distribution of neutrons with energy of the ground-state resonance of indium (1.46 eV) in water, for different neutron initial energies

Abscissas -distance from neutron source, r, cm

Ordinates - neutron flux density



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KOZHEVNIKOV, D.A.

Age of neutrons from monoenergetic and polyenergetic sources in a homogeneous moderator. Atom. energ. 18 no.6:630 Je '65. (MIRA 18:7)

L 28029-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m) WW/JD

ACC NR: AP5026445 SOURCE CODE: UR/0089/65/019/004/0382/0382

AUTHOR: Kozhevnikov, D. A.

ORG: None

TITLE: Age and area of neutron migration from polyergic sources in organic and metal-hydrogen moderators

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 382-

TOPIC TAGS: nuclear reactor, nuclear reactor moderators, neutron energy distribution

ABSTRACT: The present article is an abbreviated version of the author's original paper dealing with the migration of neutrons in various moderators. In this paper, the problem of migration age and area was solved by using experimental data obtained for sources of different spectra. The age $\tau^*_A(e)$ of neutrons having the energy e from a polyenergetic source of spectrum A was expressed by the formula: $\tau^*_A(e)=[\tau^*_B(e)-\tau^0_B(e)]K^{AB}+\tau^0_A(e)$, where $\tau^*_B(e)$ age of neutrons from polyenergetic source of spectrum B, $\tau^0_A(e)$, $\tau^0_B(e)$ -monoenergetic ages for lower limits of spectra A and B; K^{AB} modul of spectrum A with respect to spectrum B. This modul was presented as: $K^{AB}=\frac{(e_0)_A}{(e_0)_B}$, $(e_0)_{A,B}=\int_{(e_0)} g_{A,B}(e_0)\,e_0\,de_0$, where $g(e_0)$,

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UDC: 621.039.532

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ACC NR: AP5026445

is the spectrum weighting function. The migration area of thermal neutrons was formulated as: $M_A^2=(M_D^2-M_{0D}^2)K^{AD}+M_{0A}^2$. The original paper contains the ages of indium neutrons for various moderators (H_2O, D_2O, $C_{12}H_{10}$, $C_{15}H_{18}$, $C_{12}H_{10}O_{0.735}$, CH_2, C^{12}, Be, BeO) and different sources (U^{235}, Po — He, Ra — Be, Pu — Be, Po — B). The data on the average energy and the spectrum dispersion for the above sources were given in a table. It was shown that the maximum error in calculating ages and areas did not exceed the half of the error observed for monoergic sources. The original paper contained also many graphs which were not included in the article. In conclusion, it was stated that the areas and ages could be calculated on the basis of experimental data obtained by using pill sources and without conducting tests in reactors. Orig. art. has: 1 table.

SUB CODE: 18 / SUBM DATE: 23Feb65 / ORIG REF: 000 / OTH REF: 000

Card 2/2

25(1,5)
AUTHOR: Kozhevnikov, D.V.

SOV/159-58-3-10/31

TITLE: Dynamometers With Inductance Pick-Ups for Measuring the Cutting Forces During Turning and Drilling

PERIODICAL: Nauchnyye doklady vysshey shkoly. Mashinostroyeniye i priborostroyeniye, 1958, Nr 3, pp 62-69 (USSR)

ABSTRACT: The author describes new dynamometer designs for measuring the cutting forces of turning and drilling operations and suggests a new design of inductance measuring gage which may find a wide-spread application in designing such dynamometers. Inductance pick-ups have considerable advantages over other types of electrical transducers. Their manufacture and operation is simple and they are more reliable and interference-resistant during work. They have an unlimited service life, since they do not contain any moving contacts or brittle parts. They provide a powerful electrical signal at their outlets, whereby a complicated and expensive amplifier apparatus is no longer required, even when recording the forces to be

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measured on a loop oscillograph. When measuring average value of cutting forces, these pick-ups will work on a.c. of industrial frequency, eliminating the necessity of having a special generator. Inductance pick-ups are built either as a double reactance coil having one common core of thin transformer steel sheets, whereby the increase of the gap of one coil is connected with the reduction of the gap of the other one, or as two separate coils, whereby one is the working coil while the other one is a compensation coil. Although pick-ups manufactured according to the first method have a great sensitivity, they are less suitable for installation in dynamometers, since they are more complicated in tuning and adjusting. Further, they have a too low self-oscillation frequency. Pick-ups manufactured according to the second method are free of these disadvantages. They have small dimensions and may be easily installed in any type of dynamometer design. They may be reliable fastened to the

dynamometer providing thereby a constant spacing of the gap. The adjustment and the tuning of the measuring circuit is performed at a separate panel. Figure 1 shows a diagram of the working pick-ups design used for the manufacture of the author's dynamometers. The body of the pick-up is a hollow cylinder in which the coil is placed on a core, made of thin transformer steel sheets, fastened by a nut to the housing. The coil has 2,000-2,200 windings. The author developed an electric three component dynamometer of very simple design for measuring the cutting forces of turning operations which is shown in figure 2. It will measure cutting forces of up to 300 kg. The gaging was performed on a machine tool using electric dynamometers DSO-2 and DS-1. The author's dynamometers were also used for measuring the cutting forces on a shaping machine. The forces measured were recorded on a loop oscillograph MPO-2. The advantages of this dynamometer design are simplicity in manufacture and

operation, absence of intermediate transmitting links or rotating parts, high rigidity and great reliability. For measuring the torque and the axial forces when drilling, the author developed another dynamometer type as shown in figure 3. The torque of the drill is transmitted by the work piece and the dynamometer table to two symmetrically arranged measuring gages which are shown in figure 4. In the author's opinin the advantage of this dynamometer design is the high rigidity which especially important when investigating a drilling process. The cutting forces at the drill transmitted to the measuring gages cause elastic deformations of the bottom of the latter. These deformations are converted into electrical signals by the inductance pick-ups. The maximum load is 3,000 kg, whereby the bottom of the measuring gages is bent by 0,065 mm. The aforementioned dynamometer designs were connected to a differential electrical network shown in figure 5. This network consists of two identical

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closed circuits, to one of which the working pick-up is connected, while the other is connected with the compensation pick-up. Germanium diodes DG-Ts24 were used in the rectifier, but also selenium rectifiers may be used. An LM microammeter and a loop oscillograph MPO-2 were used as indicators. The network may be fed directly from the power mains using a voltage stabilizer, or from a special motor-generator producing current of 500 cycles. The measuring ranges are changed by voltage variations of the feed current using an autotransformer and by changing the gaps of the pick-ups from 0.1 to 0.4 mm. The dynamometers were subjected to comparative tests. In this connection the author mentions the works of N.N. Zorev, who stated that the best means of investigating dynamometers is to compare the readings of different designs under identical operating conditions. Both types of dynamometer developed by the author were subjected to tests. Besides these tests in the laboratory of

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the Kafedra "Rezaniya metallov" (Chair "Metal Cutting) of TPI a great number of comparative tests were performed with hydraulic, inductance and wire transducers. The detailed test results will be published in the near future. In this article the author mentions only those results which illustrate the performance of dynamometers with inductance pick-ups. Figure 7 contains a compilation of measuring results using inductance and hydraulic pick-ups. These results were obtained at different instances by workers of the Chair: A.A. Khvorostukhin, Yu.A. Rozenberg, V.B. Livshits and the author at different cutting speeds but otherwise identical test conditions. The graph in figure 7 shows that the readings of all dynamometers do not deviate for more than 5%. Analoguous results were obtained by Docent M.F. Poletika working with dynamometers with wire transducers. The author states that the data presented show the reliability of both

Dynamometers With Inductance Pick-Ups for Measuring the Cutting Forces During Turning and Drilling

designs developed by him. There are 4 diagrams, 1 circuit diagram, 2 graphs and 7 references, 6 of which are Soviet and 1 German.

ASSOCIATION: Kafedra "Stanki i rezaniye metallov" Tomskogo politekhnicheskogo instituta (Chair "Machine Tools and Metal Cutting" of the Tomsk Polytechnic Institute)

SUBMITTED: April 2, 1958

SOV/121-58-8-13/29

AUTHORS: Rozenberg, A.M., Rozenberg, Yu.A., and Kozhevnikov, D.V.

TITLE: Methods of Sharpening of Twist Drills (Metody zatochki spiral'nykh sverl)

PERIODICAL: Stanki i Instrument, 1958, Nr 8, p 31 (USSR)

ABSTRACT: Tests are reported, conducted at the Machine Tool and Metal Cutting Department Laboratory of the Tomsk Polytechnic Institute imeni S.M.Kirov, which are concerned with the behaviour of twist drills sharpened along either the conical or the helical surface or the flats. R9 and R18 high speed steel (non-cyanided) twist drills of 17, 19 and 28 mm diameter, manufactured by the Tomsk Tool Works (Tomskiy Instrumental'nyy Zavod) were tested. Drills both with milled flutes and twisted from flat stock were used with emulsion cooling in drilling type 40 steel (Brinell hardness 180-210) and 40 Kh steel (Brinell hardness 250-260). Optimum conditions for long endurance, as previously determined, were applied. The criterion of wear was a screeching noise and waviness of the hole bottom. The cutting forces were measured by a drill dynamometer with an inductive transmitter. The results of the type 40

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steel tests are listed in a Table. Figs 1 and 2 show the axial force or drilling torque, respectively, plotted against the advance per revolution. It is shown that sharpening drills along the helical surface reduces the axial force by 30% compared with drills sharpened along the conical surface. Drills sharpened along the flats yield results similar to those sharpened along the conical surface. The drilling torque is almost independent of the method of sharpening. The effect of sharpening along the helical surface is explained by the pronounced reduction of the front clearance angle at the cutting edge from a negative value of 60° to a negative value of 17°. Similar results have been obtained for both carbon and alloy steels.
There are 2 figures and 1 table.

S/145/60/000/006/006/007
A161/A026

1.1100

AUTHOR: Kozhevnikov, D.V., Assistant

TITLE: Some Aspects of the Mechanics of Skew-Angle Steel Cutting Process

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Mashinostroyeniye, 1960, No. 6, pp. 139 - 148

TEXT: The "skew-angle cutting" considered is the conventional method of using a large inclined angle of the tool cutting edge (lathe and milling cutters, drills, broaches, etc.). The article gives information on the results of an experimental investigation of the process on an especially re-equipped universal milling machine, in cutting "20X" (20Kh) steel with "P18" (R18) high-speed steel cutters with γ = 15, 30 and 45°, and α = 8°, without lubricant and with CCl_4. The cutting edge angle (λ) was varied between 0 and 70°. The cutting force components were measured by an especially designed device with two electrical dynamometers with inductive pickups (not further described). The four force components P_n, P_1, P_y and P_z were measured simultaneously. Errors made by other authors in previous works are pointed out (Refs. 1 - 9). There are 9 figures and 9 references: 6 Soviet and 3 English.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute)

Card 1/1 SUBMITTED: June 28, 1959

ZAKHARENKO, I.P.; KOZHEVNIKOV, D.V.

Dynamometer with induction transmitters for measuring torque.
Priborostroenie no.7:29-30 Jl '60. (MIRA 13:7)
(Dynamometer) (Torque--Measurement)

KOZHEVNIKOV, D.V.

Improved two-sided sharpening of heavy-duty twist drills. Mashinostroitel' no.3:36 Mr '61. (MIRA 14:3)
(Grinding and polishing)

KOZHEVNIKOV, D.V.

Distribution of temperature along cutting edges of high-speed drills. Stan.i instr. 32 no.8:20-21 Ag '61. (MIRA 14:8)
(Twist drills)

KOZHEVNIKOV, E. M. and BOBROV, A. A. (Veterinary Surgeons, Voronezh Oblast' Bacteriological Laboratory)

"Influenza in young ducks"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 48

KOZHEVNIKOV, F., kandidat voyennykh nauk.

Our country is the home of the sniper's art. Voen.znan. 29 no.8:6-7 Ag '53.
(MLRA 6:8)
(Shooting, Military)

KOZHEVNIKOV, F.P.

KONDRAT'YEVA, N.P.; PODLESSKAYA, Ye.M.; NOVIKOVA, V.F.; LASUKOV, A.N.; MURAV'YEVA, M.M.; PRINTS, G.Yu.; KOZHEVNIKOV, F.P.; PIROGOV, V.I., red.; POLYAKOVA, K.A., tekhn.red.

[Economy of Belgorod Province; a statistical manual] Narodnoe khoziaistvo Belgorodskoi oblasti; statisticheskii sbornik. Orel, Gosstatizdat, 1957. 165 p. (MIRA 11:4)

1. Belgorodskaya oblast'. Statisticheskoye upravleniye. 2. Statisticheskoye upravleniye Belgorodskoy oblasti (for all except Pirogov, Polyakova) 3. Nachal'nik Statisticheskogo upravleniya Belgorodskoy oblasti (for Pirogov)
(Belgorod Province--Economic conditions)

KOZHEVNIKOV, G.A.

Necessity for utilizing preserve areas for the preservation of Russian nature. Okhr.prir.i zapov.delo v SSSR no.4:90-97 '60. (MIRA 13:6)

(National parks and reserves)

VOLKOVA, Ye.I., inzh.; KHIRIN, N.D., inzh.; BARYSHNIKOV, A.P., inzh.; KOZHEVNIKOV, G.A., inzh.; KHOKHRIN, K.G., inzh.; BABKOV, V.A., inzh.; VNUKOV, A.K., kand.tekhn.nauk

Starting clutch for draft and blowing machinery and pit mills. Teploenergetika 8 no.6:31-32 Je '61. (MIRA 14:10)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i ratsionalizatsii elektrostantsiy.
(Clutches (Machinery))
(Electric power plants--Equipment and supplies)

TUSEVICH, V.A., inzh.; BARYSHNIKOV, A.P., inzh.; KOZHEVNIKOV, G.A., inzh.; MYZNIKOV, N.F., inzh.

Use of an axial flue gas pump with reversible blades in a boiler operating on natural gas. Elek. sta. 33 no.8:13-16 Ag '62. (MIRA 15:8)

(Boilers--Equipment and supplies)

TUSEVICH, V.A., inzh.; BARYSHNIKOV, A.P., inzh.; KOZHEVNIKOV, G.A., inzh.; MYZNIKOV, N.F., inzh.

Improvement of a flue gas pump system. Energomashinostroenie 9 no.3:36-39 Mr'63. (MIRA 17:5)

BRYUKHATOV, N.L.; KOZHEVNIKOV, G.I.

Use of a magnetic sonde in the analysis of magnetic anisotropy in rolled ferromagnetic materials. Zav.lab. no.11:1319-1322 '59. (MIRA 13:4)

1.Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.
(Iron --Magnetic properties)

BRYUKHATOV, N.L., prof., doktor fiz.-mat.nauk; KOZHEVNIKOV, G.I., inzh.

New magnetic rod method for the analysis of the crystal structure and strains in rolled ferromagnetic materials, and electrical and other alloyed steels. Trudy MIIT no.122: 103-111 '59. (MIRA 13:5)
(Magnetic testing) (Steel alloys--Testing)

ZAROCHENTSEV, G.V., kand. tekhn. nauk; KOZHEVNIKOV, G.I., inzh.

Ultrasonic and magnetic testing methods for determining the quality parameters of rail hard-facing. Trudy TSNII MPS no.243: 104-130 '62. (MIRA 16:6)

(Railroads—Rails—Testing)
(Ultrasonic testing)
(Magnetic testing)

KOZHEVNIKOV, G.N.; KUZNETSOV, S.I.

Extracting alumina from slags containing helenite. Izv. vost. fil. AN SSSR no.11:63-71 '57. (MIRA 11:1)

1 Ural'skiy filial Akademii nauk SSSR.
(Alumina) (Slag) (Bitumen)

KOZHEVNIKOV, G.N.; KUSAKIN, P.S.

Diagram representing the equilibrium condition of the system helenite-sodium oxide. Izv. Sib. otd. AN SSSR no.7:13-22 '58. (MIRA 11:9)

1.Uraliskiy filial AN SSSR.
(Systems (Chemistry)) (Ozocerite) (Sodium oxide)

KOZHEVNIKOV, G.N.

Some characteristics of the interaction of gehlenite with soda and lime in the sintering process. Trudy Inst. met. UFAN SSSR no.4:65-70 '58. (MIRA 12:10)
(Sintering) (Gehlenite)

KOZHEVNIKOV, G.N.; KUZNETSOV, S.I.

Most satisfactory conditions for the leaching of soda-gehlenite sinter. Trudy Inst. met. UFAN SSSR no.4:71-75 '58.
(MIRA 12:10)

(Gehlenite) (Leaching)

MIKULINSKIY, A.S.; KOZHEVNIKOV, G.N.

Preparation of metallic sodium by the reduction of its sulfate or soda by carbon; research experiments. Trudy Inst. met. UFAN SSSR no.77-80 '58. (MIRA 12:10)
(Metallurgical research) (Sodium)

KOZHEVNIKOV, G. N.: Master Tech Sci (diss) -- "On the interaction of helonite with soda at high temperatures". Sverdlovsk, 1959. 12 pp (Ural Affiliate of the Acad Sci USSR, Inst of Metallurgy), 150 copies (KL, No 15, 1959, 117)

S/081/62/000/009/041/075
B166/B144

AUTHORS: Mikulinskiy, A. S., Kozhevnikov, G. N.

TITLE: Obtaining metallic sodium by using carbon to reduce its sulfate or soda

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 381, abstract 9K31 (Sb. "Fiz.-khim. osnovy proiz-va stali". M., AN SSSR, 1961, 206-216)

TEXT: Na was obtained with a yield of 93-96% by using coke to reduce soda at 1100°C with a residual pressure in the retort of 1-2 mm Hg. Reduction of Na_2SO_4 by coke at 1100°C without the addition of lime, and leaving a residual pressure in the retort of 1-2 mm Hg, gave metallic sodium with a yield of 55-56%. Addition of lime increased the yield to 92-94%. The influence of pressure, temperature, nature and size of reducing agent on the degree of Na extraction was determined. The possibility of obtaining potassium oxide by dissociation of K_2CO_3 at a pressure of 0.5-1.0 mm Hg and a temperature of 900°C is demonstrated. [Abstracter's note: Complete

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Obtaining metallic sodium ...

S/081/62/000/009/041/075
B166/B144

translation.]

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KOZHEVNIKOV, G.N.; KUZNETSOV, S.I.

Kinetics of the interaction of helenite with soda. Izv.Sib.otd. AN SSSR no.8:127-130 '61. (MIRA 14:8)

1. Ural'skiy filial AN SSSR, Sverdlovsk.
(Slag) (Sodium carbonates)

KUZNETSOV, S.I.; SEREBRENNIKOVA, O.V.; KOZHEVNIKOV, G.N.

Effect of cation exchangers on the stability of aluminate solutions.
Zhur.prikl.khim. 34 no.10:2342-2345 O '61. (MIRA 14:11)
(Aluminates) (Ion exchange)

S/020/61/140/003/020/020
B103/B101

AUTHORS: Kozhevnikov, G. N., Mikulinskiy, A. S., and Bakhireva, L. D.

TITLE: Recovery of metallic sodium by reducing its hydroxide by carbon in vacuo

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 3, 1961, 652-654

TEXT: Methods were studied to obtain a complete reduction of NaOH by carbon in vacuo. The demand for sodium hydride to remove scale from steel products is expected to increase. The resulting NaOH by-products should be utilized. In East Siberia, inexpensive NaOH will be recovered in the production of aluminum hydroxide from nephelite and syenite, owing to the low cost of electric power. Thus, the object of this study was the reduction of NaOH by C in vacuo. NaOH, previously melted at 400°C, was reacted with metallurgical coke (grain size 0.25 mm) in excess (20%) according to the equation $NaOH + C = Na + CO + 1/2\ H_2$ (3). Preliminary tests showed that stirring of the charge does not affect the yield in metal. A non-briquetted charge (weighed portion of 15-30 g) was heated in a crucible of ст-3 (st-3) steel. The residual pressure and the yield of Na were measured.

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Recovery of metallic sodium ...

The authors found that the reduction of NaOH in vacuo proceeds in two stages: a) at 600-700°C, NaOH reacts with C as follows: $6NaOH + 2C = 2Na + 3H_2 + 2Na_2CO_3$ (1). The reduction of soda is insignificant; b) a further increase in temperature results in an intensive interaction between soda and C: $Na_2CO_3 + 2C = 2Na + 3CO$ (4). For temperatures above 1000°C, the summational equation (3) holds (see above). Above 800°C, the yield in Na increases with rising temperature and attains a maximum at 1000°C. Duration of reaction 0.5-1.0 hr. A pressure increase from 1 to 5 mm Hg has merely a slight effect on the Na yield. On the other hand, the yield and quality of Na are considerably reduced at 10-15 mm Hg. This is attributed to oxidation of Na by CO. The purer the coke used, the lower the weight and alkali content of the residue. Therefore, the authors recommend very low-ash coke which, together with the determination of optimum quantities of initial substances, will facilitate the continuous production of Na. The yield in metallic Na was 97-98% as compared to 35-50% mentioned in the literature. There are 3 figures, 4 Soviet references and 3 non-Soviet references. The two references to English-language publications read as follows: W. Kroll, A. W. Schlechten, Trans. Electrochem. Soc., 93, 217, (1948); USA-Patent, No. 2789047, April 16, 1957.

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