"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

An Enthalpy Diagram for the Lithium-Bromide Water Solution 57-28-3-29/33

thalpy values of the overheated water steam at a given pressure at the temperatures corresponding to the concentration values of the liquid phase. A short instruction for the use of the diagrams is given. There are 3 figures, 1 table, and 10 references, 8 of which are Soviet.

SUBMITTED: October 20, 1957

1. Bromide-lithium-water systems--Enthalpy 2. Enthalpy--Measurement

Card 4/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

AUTHORS: Rozenfel'd, L. M., Karnaukh, M. S. SOV/57-28-7-31/35

TITLE: Dynamic Heating by Means of a Reverse Absorption Lithium Bromide Machine (Dinamicheskoye otopleniye s pomoshch'yu obrashchennoy absorbtsionnoy bromisto-litiyevoy mashiny)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 7, pp. 1585-1591, 1958 (USSR)

ABSTRACT: The first laboratory experimental refrigerating machine with a lithium bromide solution was produced in the USSR at the Institute for Thermal Power Engineering of the AS Ukrainian SSR (Ref 4). The theoretical investigation leads to the conclusion that it is expedient to use this solution as working material in a dynamic heating system. Therefore, with the aid by the Institute for Thermal Power Engineering of the AS Ukrainian SSR the existing experimental plant was mounted according to the reverse scheme, and by its means an experimental investigation was carried out. The results of this investigation are given. Based on these investigations the authors found the following: 1.) The aqueous lithium bromide solution can be used for a dynamic

Card 1/5

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

Dynamic Heating by Means of a Reverse Absorption Lithium Bromide Machine SOV/57-28-7-31/35

heating at the expense of the discharged heat in a system of combined cycles of the absorption reverse machine.
2.) The experiments showed a sufficient coincidence of the experimental results with those of the calculations.
3.) The use of this working material leads to a simplification of the system and to a decrease of the metal volume; it does, however, not supply a complete utilization of the temperature during the cold season at low temperatures. The advantage of the investigated system is the possibility to use it in summer for airconditoning. There are 3 figures, 4 tables, and 5 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti (Leningrad Technological Institute of Refrigeration Industry)

SUBMITTED: March 5, 1958

Card 2/3

Card 3/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ROENFELD, L. M., KARNAUKH, M. S.

"The Investigation of a Lithium Bromide Absorption Refrigeration and Heat-Pump Machine."

Report submitted for the 10th Intl. Refrigeration Congress, Copenhagen, 19 August -2 September 1959.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ROZENFEL'D, Lev Markovich, prof., doktor tekhn.nauk; TKACHEV, Anatoliy Georgiyevich, prof., doktor tekhn.nauk; GUREVICH, Yevgeniy Semenovich, inzh.; ONOSOVSKIY, V.V., inzh.; SERDAKOV, G.S., inzh.; TSYRLIN, B.L., inzh.; KALNIN', I.M., inzh.; ROMANOVSKIY, N.V., inzh.; YATSUNOV, I.F., inzh.; DANILOVA, G.N., dotsent; MIKHAL'SKAYA, R.N., inzh.; KARNAUKH, M.S., inzh.; STUKALENKO, A.K., inzh.; IL'IN, A.Ya., inzh.; TSIPERSON, A.L., red.; BABICHEVA, V.V., tekhn.red.

[Examples and designs of refrigerating machines and apparatus] Primery i raschety kholodil'nykh mashin i apparatov. Moskva, Gos. izd-vo torg.lit-ry, 1960. 237 p. [___Thermodynamic diagrams of the refrigerants used] ___Termodinamicheskie diagrammy rabochikh tel kholodil'nykh mashin. (MIRA 13:9)
(Refrigeration and refrigerating machinery)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ROZENFEL'D, L.M., doktor tekhn.nauk, prof.; KARNAUKH, M.S., inzh.

Lithium bromide absorption refrigerating machine. Khim.mash. no.4:4-6 Jl-Ag '62. (MIRA 15:7)
(Refrigeration and refrigerating machinery)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, M.S., inzh.

Actual processes of the absorption lithium bromide refrigerating machine. Khol.tekh. 39 no.6:16-20 N-D '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.
(Refrigeration and refrigerating machinery)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, M. S.; ROZENFELD, L. M.

"Analysis of actual processes in a lithium bromide absorption machine."

Report presented at the 11th International Congress of Refrigeration, (IIR), Munich, West Germany, 27 Aug-4 Sep 63.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARMAUKH, N.F., inzh.

Electric welding and repair networks of plants. Prom. energ. 21 no. 1:20-21 Ja '66 (MIRA 19:1)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, N.F., inzh.

Improvement in the design of the main current collectors of bridge cranes. Prom. energ. 19 no.5:18-19 My '64.

(MIRA 17:6)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, N.F., inzh.

Connecting of industrial electric trucks directly to the electric power distribution network. Prom.energ. 18 no.1: 26-27 Ja '63. (MIRA 16:4)

(Industrial electric trucks)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, N.F., inzh.

Connection of single-plase brake magnets in the electrical networks of cranes. Prom. energ. 18 no.5:20-21 My '63. (MIRA 16:6)

(Electric cranes—Brakes)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, N.F., inzh.

Use of a flexible transmission in RK-1 induction relays.
Prom.energ. 19 no. 2:19 F '64. (MIRA 17:5)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ACC NR: AT6022255 SOURCE CODE: UR/0000/66/000/000/0048/0055

AUTHOR: Zyrin, S. S.; Karnaukh, O. I.; Petrov, D. M.

ORG: none

TITLE: Changing the frequency of a klystron oscillator with multiresonator oscillatory system

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya elektroniki. Doklady. Moscow, 1966, 48-55

TOPIC TAGS: klystron, multiresonator klystron, SHF oscillator

ABSTRACT: Two connected problems of frequency stability in a klystron oscillator are solved: on the basis of stability conditions, the oscillatory systems are analyzed, and design formulas for the multifrequency klystron oscillator are deduced. For the frequency-stability analysis, truncated equations describing a

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ACC NR: AT6022255

system with many degrees of freedom are used; supercritical couplings among n resonators (n "circuits" in an equivalent network) are assumed. The stability condition is described by: $G_{2s} > 2G_{2w}\frac{K_s}{K_w}$, where G_{2s}, G_{2w}, K_s, K_w are the conductances and feedback factors at spurious and working frequencies, respectively. Best practical results can be obtained from 3- and 5-resonator klystrons whose central natural frequency is used as a working frequency. Engineering formulas for a 3-resonator klystron are developed (tunable band, feedback factor, stabilization coefficient, optimal stationary conditions, output power). Orig. art. has: 4 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 09Apr66 / ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

SALO, D.P.; TOPORINA, O.M.; KARNAUKH, O.M.; KRIVENCHUK, P.Ye. [Kryvenchuk, P.Ie.] PAVLENKO, L.S.

Alkylolamines and their possible use in pharmacy. Report No.1. Farmatsev zhur. 16 no.5:16-20 '61. (MIRA 17:10)

1. Kafedra tekhnologii lekarst i galenovykh preparatov Khar'kovskogo farmatsevticheskogo instituta (zaveduyushchiy kafedroy dotsent G.P. Pivnenko [Pivnenko, H.P.]).

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, O.M., inzh.

In the Ukrainian Scientific Research Institute of the Oil and Fat Industries. Khar.prom. no.2:80-81 Ap-Je '62. (MIRA 15:9)

(Cleaning compounds)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, P.D.

KARNAUKH, P.D.

Protective case for transporting a single flask of blood. Khirurgiia 33 no.11:125 N '57. (MIRA 11:2)

1. Iz Molodechnenskoy oblastnoy stantsii pereliveniya krovi (glavnyy vrach P.D.Karnaukh)
(BLOOD, PRESERVED
protective case for transport of single flask (Rus))

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, P.D.; TKACH, N.M.

Blood transfusion in thyrotoxicosis. Zdrav.Belor. 5 no.1:53-54 Ja '60. (MIRA 13:5)

1. Iz khirurgicheskogo otdeleniya Molodechnenskoy oblastnoy bol'nitsy (glavnyy vrach A.S. Romashko).
(BLOOD--TRANSFUSION) (THYROID GLAND--DISEASES)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, P.D.

Blood transfusion. Zdrav. Belor. 6 no. 10:44-47 O '60.
(MIRA 13:10)

(BLOOD—TRANSFUSION)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

SOV/137-58-7-14531

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 84 (USSR)

AUTHORS: Gupalo, I.P., Svoboda, R.V., Karnaukh, S.A.

TITLE: On the Nature of Non-quenching Flashes (K voprosu o prirode negasnushchikh vspyshek)

PERIODICAL: Tr. Vses. alyumin.-magn. in-ta, 1957, Nr 39, pp 313-317

ABSTRACT: The periodic appearance in Al cells of the anode effect or, as it is termed, non-quenching flashes, which are difficult to suppress, is due to the sharp reduction in the area of the Al cathode after metal has been drawn off or to sudden, excessive cooling of the bath. The presence of thick layers of precipitate on the bottom and of crust makes for the appearance of eddy motions of the Al in the bath, since under these conditions the contact surface between Al and bottom is reduced, with the result that horizontal current components appear in the bath, which distort the steady magnetic field of the bath. This brings the Al into motion and with it the electrolyte which is a conductor and is also affected by the magnetic fields in the bath. All this stirs up the alumina precipitates and results in partial suspension of the alumina. It may also be hypothesized that

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

SOV/137-58-7-14531

On the Nature of Non-quenching Flashes

the muddied undissolved alumina is attracted to the anode and covers its surface in part, thus stabilizing the flash. One of the methods of eliminating non-quenching flashes is to charge sifted carbon foam into the bath. The particles of carbon adsorb the suspended alumina by electrostatic force.

I.G.

1. Aluminum--Electrolytic 2. Anodes (Electrolytic cell)--Performance
3. Electrolytic cell--Electrical factors

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, V.G.

Exhibition of electronic measuring instruments made in Denmark. Avtom.i prib. no.1:94-95 Ja-Mr '62. (MIRA 15:3)
(Kiev--Exhibitions) (Denmark--Electronic instruments)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

SIMONENKO, Petr Kirillovich; GOROVOY, Mikhail Yerofeyevich; KARNAUKH, Vitaliy Ivanovich; PRUSOV, Vsevolod Vasil'yevich; BOYTSOV, Vsevolod Ivanovich; BOROK, M.Ye., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Handbook for road construction engineers] Spravochnik inzhenera mekhanika dorozhnika. Moskva, Nauchno-tekhn. izd-vo M-va Avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 375 p. (MIRA 14:8)
(Road machinery)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KRIVSHIN, Aleksandr Pavlovich; PECHENIN, Nikolay Fedorovich; KAGNAUKH, V.M., retsenzent; MIKHAYLOV, L.N., red.

[Repairing bulldozers by the unit method] Remont bul'-dozerov agregatnym metodom. Moskva, Transport, 1964. 168 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D.

New species of mullein, Verbascum polyphyllum (C.A.M.) A.Grossh., in the Ukrainian S.S.R. Bot.zhur.[Ukr.] 9 no.2:90 '52. (MLRA 6:11)

1. Institut botaniki Akademii Ukrains'koi RSR, Viddil vishchikh roslin.
(Ukraine--Mullein) (Mullein--Ukraine)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, YE.D.

Crowberry family. Flora URSR 7:184-185 '55. (MIRA 9:7)
(Ukraine--Crowberry)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D.

Jewelweed family. Flora URSR 7:231-235 '55. (MLRA 9:7)
(Ukraine--Touch-me-not)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D.

St.-Johns-wort family. Flora URSR 7:301-313 '55. (MIRA 9:7)
(Ukraine--St.-Johns-wort)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D.

Sea heath family. Flora URSR 7:318-322 '55. (MIRA 9:7)
(Ukraine--Sea heath)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D. [Karnaukh, IE. D.]; KOTOV, M.I.

Primrose family - Primulaceae Vent. Flora URSR 8:72-128 '57. (MIRA 11:6)

(Ukraine--Primroses)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Ye.D. [Karnaukh, IE.D.]

The speedwell genus (Veronica L.). Flora URSR 9:476-631 '60.
(MIRA 13:11)

(Ukraine--Speedwell)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

BARBARICH, A.I.[Barbarych, A.I.], kand. biol. nauk; BRADIS,Ye.M., doktor biol. nauk; VISYULINA, O.D., doktor biol. nauk; VOLODCHENKO, V.S.; DOBROCHAYEVA, D.M., kand. biol. nauk; KARNAUKH, Ye.D.; KATINA, Z.F., kand. biol. nauk; KOTOV, M.I., doktor biol. nauk; KUZNETSOVA, G.O.[Kuznetsova, H.O.], kand. biol. nauk; OLYANITSKOVA, L.G.[Olianits'ka, L.H.]; OMEL'CHUK, T.Ya., kand. biol. nauk; POYARKOVA, O.M.; PROKUDIN, Ye.M., doktor biol. nauk; PROTOPOPOVA, V.V.; SLYUSARENKO, L.N.; SMOLKO, S.S.; KHRZHANOVSKIY, V.G. [Khrzhanovs'kyi, V.H.], doktor biol. nauk; ZEROV, D.K. akademik, otv. red., ONISHCHENKO, L.I., red.

[Key for the identification of plants in the Ukraine] Vyznachnyk roslyn Ukrainy. Vyd.2., vypr. i dop. Kyiv, Urozhai, 1965. 876 p. (MIRA 18:9)

1. Akademiya nauk URSR, Kiev. Instytut botaniky. 2. AN Ukr.SSR (for Zerov). 3. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva (for Khrzhanovskiy).

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Yu.

Methods for calculating licensing compensation. Vnesh. torg. 43 no.7:44-48 '63. (MIRA 16:8)

(Patent licenses)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKH, Yu.N., inzh.

Organizing safe operation of tower cranes. Bezop. truda v prom. 4 no. 5:25-26 My '60. (MIRA 14:5)

1. Trest Zaporozhstroy.
(Cranes, derricks, etc.—Safety measures)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. F., Cand Tech Sci -- (diss) "Angular Correction of the Gearing of ~~the~~ Traction Transmissions of Electric Locomotives." Mos, 1957. 9 pp (Mos Order of Lenin and Order of Labor Red Banner Inst of Engineers of Railroad Transport~~ation~~ im I. V. Stalin), 110 copies (KL, 47-57, 87)

29

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F.

KARNAUKHOV, A.F., inzh.

Determining the most useful coefficients of angular correction for traction gearing under conditions of minimum relative specific pressure. Trudy MIIT no.96:111-128 '57. (MIRA 11:1)
(Gearing) (Locomotives)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand. tekhn. nauk.

Effect of railjoints on rolling stock dynamics. Trudy MIIT no.103: 65-75 '58. (MIRA 11:12)
(Railroads--Rails--Fastenings)
(Railroads--Rolling stock)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand. tekhn. nauk.

Designing a hollow-shafted Alsthom-type drive. Trudy MIIT no.103: 76-83 '58. (MIRA 11:12)

(Electric locomotives)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand.tekhnauk

Dynamics of a cam mechanism. Trudy MIIT no.123:132-137 '60. (MIRA 14:3)
(Electric locomotives) (Cams)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand.tekhn.nauk, dotsent

Precise solution of the equations of the motion of a wheel on rail joints. Trudy MIIT no.157:112-173 '62. (MIRA 16:5)
(Railroads—Rolling stock) (Railroads—Rails)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

TAFT, Viktor Aleksandrovich. Prinimali uchastiye: MILYUTIN, A.P.; KARNAUKHOV, A.F.

[Principles of the spectral theory and design of networks with variable parameters] Osnovy spektral'noi teorii i raschet tsepei s peremennymi parametrami. Moskva, Nauka, 1964. 205 p. (MIRA 17:11)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand. tekhn. nauk

Calculating tightnesses in press fitting of shaped rings on shaped rings. Trudy MIIT no.164:133-137 '63. (MIRA 18:3)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand.tekhn.nauk, dotsent; STATNIKOV, R.B., insh.

Determining the dynamic loads acting upon the transmission gear teeth of locomotives during the passage over rail joints. Trudy MIIT no.200:66-77 '64.

Some problems of the testing of locomotive gear transmissions. Ibid.:78-86 (MIRA 18:8)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.F., kand. tekhn. nauk; MILYUTIN, A.P., inzh.; TEMLYAKOVA, Yu.V.

Method for determining the parameters of nonlinear electric circuits by the given conditions. Trudy MEIT no.207:172-178 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 46186-66 EWT(1)

ACC NR: AT6015186 SOURCE CODE: UR/2649/66/000/221/0004/0017

AUTHOR: Karnaukhov, A. F. (Docent, Candidate of technical sciences); Milyutin, A. P. (Candidate of technical sciences)

ORG: none

36
B+1

TITLE: Determining wave shape in nonlinear electric circuits 15

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 221, 1966. Voprosy elektrotekhniki i elektromekhaniki (Problems of electrical engineering and electromechanics), 4-17

TOPIC TAGS: electric circuit, nonlinear circuit, frequency divider, FOURIER SERIES, ELECTRIC NETWORK

ABSTRACT: The small-parameter method is not always applicable to nonlinear electric circuits as their equations do not always contain a small parameter. The harmonic-balance method is applicable only to simpler electric networks. Hence, the authors propose a new method in which the sought-for infinitely differentiable function is replaced, within a finite time interval, by a Fourier series. The method is applicable to complex nonlinear networks in which the characteristics

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 11 [illegible]-66

ACC NR: AT6015186

of nonlinear elements are representable by high-degree polynomials; both sustained and transient circuit conditions can be analyzed. A magnetic frequency divider circuit was used for theoretical and experimental verification of the method; its equations are written and current-wave shapes shown. Orig. art. has: 3 figures and 70 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003

Card 2/2 fv

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. I.

"Mechanism of Electrochemical Deposition of Oxygen on Nickel and Iron." Sub 18 Jun 51, Order of the Labor Red Banner Sci Res Physicochemical Inst imeni L. Ya. Karpov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ACCESSION NR: AP4033698 S/0073/64/030/004/0365/0369

AUTHOR: Skobets, Ye. M.; Karnaukhov, A. I.; Kavetskiy, N. S.

TITLE: The use of instantaneous currents in the inversion polarography

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 4, 1964, 365-369

TOPIC TAGS: inverse polarography, stripping analysis, instantaneous currents

ABSTRACT: The purpose of this article was to study the reverse instantaneous peak current and to determine the possibility of using it in inversion polarography. The work was carried out on an automatic recording polarograph, PA-1. The studies were made with 10^{-3} to 10^{-4} M solutions of cadmium, thallium, lead and zinc. The moving contact on the potentiometer drum of the polarograph was placed so that the selected voltage would exceed the deposition potential of the investigated cation. After this the potentiometer drum was disconnected from the axis of the drive motor and the rotation of polarographic recording drum was set at the maximum rate. To record the reverse instantaneous peak currents the zero of galvanometer was displaced to the right. When the switch K_1 (see Fig. 1 of the enclosure) was locked the motor was turned on and the switch K_2 was locked. Then, after a strictly

Card 1/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ACCESSION NR: AP4033698

constant time interval (electrolysis time) switch K_1 was closed. In such a method the galvanometer spot marked both the direct and the inverse instantaneous peak currents which were recorded on the photographic paper. Damping capacitors were disconnected during measurements of instantaneous peak currents. The reverse instantaneous peak currents as a function of concentrations of different ions are shown in Figure 2 of the enclosure. It is shown that reverse instantaneous peak currents are much greater than direct peak currents, thus facilitating determination of smaller concentrations. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Ukrainskaya sel'skokhozyaystvennaya akademiya (Ukrainian Academy of Agriculture)

SUBMITTED: 15May63 ENCL: 02

SUB CODE: OP NO REF SOV: 008 OTHER: 010

Card 2/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ACCESSION NR: AP4033698 ENCLOSURE: 01

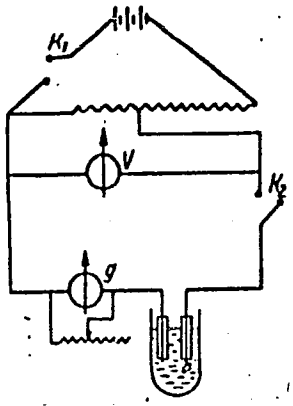

Fig. 1. The main circuit for recording of reverse peak currents.

Card 3/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

SKOBETS, Ye.M.; KARMAUKHOV, A.I.

Use of sparingly soluble cathodic deposits in inversion polarography. Ukr. khim. zhur. 30 no.7:693-696 '64 (MIRA 18:1)

1. Ukrainskaya ordena Trudovogo Krasnogo Znameni sel'skokhozyaystvennaya akademiya.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 53920-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5011423 UR/0073/65/031/004/0408/0411

AUTHOR: Skobets, Yu. M., Karnaukhov, A. I.

TITLE: Determination of microconcentrations of Cd(II), Pb(II), and Mn(II) by the method of reverse surge currents

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 4, 1965, 408-411

TOPIC TAGS: microanalysis, cadmium determination, lead determination, manganese determination, reverse surge current, inversion polarography

ABSTRACT: The method of reverse surge currents, used by the authors in conjunction with inversion polarography, is based on the discharge of galvanic cells formed in the course of preliminary electrolytic concentration of the metal on the working electrode. The discharge was performed by shortcircuiting the electrodes, and the reverse current thus produced was termed the surge current. The sensitivity of the method is 6 times as high as the method of anodic dissolution with a gradually decreasing potential. A study of the dependence of reverse surge currents on the electrolysis potential for $NmCl_2$ solutions (6×10^{-4} mole) showed that the optimum electrolysis potential was -1.9 V. The dependence of reverse surge currents on the concentrations of Cd^{2+}, Pb^{2+}, and Mn^{2+} was found to be linear in the neighborhood of 10^{-7} mole/1. In order to determine these ions

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 53920-65

ACCESSION NR: AP5011423

when they are present together, the electrolysis is carried out at the deposition potential of the most positive ion, for example lead, and the reverse surge current is recorded. The electrolysis is then repeated at the deposition potential of manganese, and the reverse surge current is recorded again. The difference in the values of the currents enables one to determine the content of manganese in the presence of the more electropositive lead ions. The results are highly reproducible and indicate that the method is promising for determinations of ultramicroconcentrations. Orig. art. has: 6 figures.

ASSOCIATION: Ukrainskaya sel'skokhozyzystvennaya akademiya (Ukrainian Academy of Agriculture)

SUBMITTED: 18Dec63 ENCL: 00 SUB CODE: GC, OP

NO REF SOV: 008 OTHER: 007

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 52286-65 EWT(m)/EPR/T/EWP(t)/ EWP(b) Pa-4 IJP(c) JD

ACCESSION NR: AT5012679 UR/2513/65/015/000/0179/0184 22

AUTHOR: Skobets, Ye. M.; Karnaukhov, A. L.; Kavetskiy, N. S. 21 B+1

TITLE: Electrolytic concentration of substances followed by their determination by means of reverse surge currents

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy, v. 15, 1965. Metody kontsentrirovaniya veshchestv v analiticheskoy khimii (Methods of concentrating substances in analytical chemistry), 179-184

TOPIC TAGS: electrolytic concentration, electrochemical analysis, reverse surge current, polarography, lead determination, cadmium determination, manganese determination 27 27 27

ABSTRACT: The authors studied the phenomenon of the reverse surge current and attempted to determine its potential uses in polarography. The surce currents in solutions of 1.2×10^{-3} M $Pb(NO_3)_2$, 6×10^{-4} M $TlNO_3$ in 0.1 M KNO_3, and 9×10^{-4} M $CdCl_2$ and $ZnCl_2$ in 0.1 M KCl were recorded by means of an automatic recording PA-1 polarograph. A spherical silver-amalgam electrode was employed. The reverse surge currents of Cd, Pb, and Mn were studied in relation to the concentration of these metals in solution, to preliminary electrolysis in solutions of $CdCl_2$, $Pb(NO_3)_2$, and $MnCl_2$,

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

L 52286-65

ACCESSION NR: AT5012679

and to temperature in $CdCl_2$. The sensitivity of the method of reverse surge currents was found to be 6 to 9 times as high as that of the technique of anodic dissolution with a steadily decreasing negative potential. The method can therefore be used for determining ultramicroconcentrations. In addition, it is simple to carry out and gives reproducible results. Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: Komissiya po analiticheskoy khimii, AN SSSR (Commission on Analytical Chemistry, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 007 OTHER: 009

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.K., podpolkovnik meditsinskoy sluzhby

Pin for osteosynthesis of ankle fractures. Voen.-med. zhur. no.6: 76 '64. (MIRA 18:5)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.K.

Chroming lengthens the service life of diesel pistons. Elek.i tepl.tiaga 6 no.4:9-10 Ap '62. (MIRA 15:5)

1. Starshiy master zagotovitel'nyy tsekha depo Dzhambul Kazakhskoy dorogi.

(Protective coatings)
(Diesel locomotives--Maintenance and repair)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.K.

Fistula of the rectum and vaginal vestibule. Vest. khir. 92 no.4:144 Ap '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. P.

"Adsorption Method of Measuring the Surface of Platinum in Platinized Silica Gels." Sub 13 Jun 51, Order of the Labor Red Banner Sci Res Physico-chemical Inst imeni L. Ya. Karpov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.P.

Separate measurements of the surface area of complex adsorbents. A. P. Karnaukhov (L. Ya. Karpov Phys.-Chem. Inst.). [illegible] Struktury Vysokodispersnykh i Poristykh Tel. Akad. Nauk S.S.S.R., Trudy Soveshchaniya 1951, 145-52 (1953); cf. C.A. 47, 5768f.—An adsorption arrangement of increased precision is described. All measuring devices are held at 25 ± 0.05°; the adsorption vessels are at 250 ± 0.5°. The adsorption isobar of H_2 on silica gel was detd. at 600 mm. pressure between −183 and 450°; it has a min. at 250°. Adsorption isotherms of H_2 on platinized silica gels contg. 0.2 and 0.5% Pt were taken at 250°. The sp. surface of silica gel was decreased by 20% by deposition of 0.5% Pt and by 14% by 0.2% Pt. The difference of adsorption of H_2 on platinized and non-platinized silica gel gives the adsorption of H_2 on Pt. From a comparison of this value and values measured on Pt black the following values were obtained: sp. surface in sq. m./g. Pt sponge, 0.17; Pt in 0.5% platinized gel, 70; Pt in 0.2% platinized gel (formed at 550°), 55; Pt in 0.2% gel (formed at 600°), 30; corresponding crystal sizes in A.: 10,500, 40, 50, 90. Pt on silica gel conserves its high dispersion as compared to Pt sponge.

S. Pakswer

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. P.

USSR/Chemistry - Platinized Silica Gel May 53

"Some Observations on G.K. Boreskov and A.P. Karnaukhov's Article on 'The Measurement of the Surfaces of Platinized Silica Gels'," N.I. Kobozev, Moscow State Univ

Zhur Fiz Khim, Vol 27, No 5, pp 761-764

Criticizes work by Boreskov and Karnaukhov, who proposed a method for detg the surface of Pt deposited in the form of dispersed adsorption films, by measuring the adsorption of H_2. States that Boreskov and Karnaukov stress crystallization, while

273T19

there is actually marked atomization of Pt in the films in accordance with the theory of active ensembles.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

1. [illegible], S. K., KASHAUKHOV, A. F.

2. USSR (600)

4. Catalysts

7. Adsorption method used for measuring the platinum surface in plantinized silica gels, Zhur. fiz. khim. 26, no. 12, 1953.

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

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

Karnaukhov, A. P.

Comments on "Surface measurements on platinized silica gels" by G. K. Boreskova and A. P. Karnaukhov. N. I. Kobozev (M. V. Lomonosov State Univ., Moscow). *Zhur. Fiz. Khim.* 27, 761-4(1953).—Kobozev takes issue with the interpretation of data by Boreskov and Karnaukhov (*C.A.* 47, 5758g) in detg. the surface of a metal on a carrier. Kobozev contends that B. and K.'s data point to significant atomization of the Pt in thin layers.

J. Rovtar Leach

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKOV, A.P.

USSR.

The adsorption of nitrogen vapors on carbon black. A. P. Karnaukhov, A. V. Kiselev, and E. V. Khropova (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 92, 261-4(1953); cf. Avgul', *et al.*, *C.A.* 47, 1168i.—The adsorption of N on C black was studied over a broad range of degrees of surface filling. The measurements were made with the samples used in the earlier work on the b.p. of N. The satn. point corresponded to 1.07 cc./g. The pore diam. was calcd. to be 520 A., and the sp. surface was 125 sq. m./g. These values agree well with those obtained by expts. on the adsorption of C_6H_6. J. R. L.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.P.; KISELEV, A.V.; KHRAPOVA, Ye.V.

Nature of the adsorption of nitrogen vapors on quartz and silica gels. Dokl.AN SSSR 94 no.5:915-918 F '54. (MLRA 7:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom M.M.Dubininym.
(Adsorption) (Nitrogen) (Silica)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14704

Abstract: percent of H_2O) was determined. The system II produces the binary compound $3KNO_3.NH_4NO_3$ and a double-sided solid solutions composed by KNO_3 and the binary salt on one side and by NH_4NO_3 and the binary salt on the other. The composition of the solution (in %% by weight) of the transition point answers to 22.73 percent of KNO_3, 43.81 percent of NH_4NO_3 and 34.09 of H_2O; that of the eutonic [sic] point is 20 percent of KNO_3, 47 percent of NH_4NO_3 and 33 percent of H_2O. Continuous solid solutions are forming in the system III. The authors explain this fact by the closeness of the dimensions of ion radii of the elements composing the system, as well as by the same crystalline structure of $RbNO_3$ and NH_4NO_3.

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

Karnaukhov, A.S.

Distr: 4E4j 7 7

Solubility in the ternary system $NaNO_3$-Na_2HPO_4-H_2O at 25°. A. V. Makin and A. S. Karnaukhov (K. D. Ushinskii State Pedagog. Inst., Yaroslav). Zhur. Neorg. Khim. 2, 1420-3(1957).—The soly. in the $NaNO_3$-Na_2HPO_4-H_2O system was detd. at 25° by the isothermal method. The soly. isotherm consists of 2 branches of crystn. for $NaNO_3$ and $Na_2HPO_4 \cdot 12H_2O$. No formation of chem. compds. nor of solid solns. was observed. J. Roytar Leach

5
1

FM 11

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

AUTHORS: Karnaukhov, A.P., Kiselev, V. 76-12-5/27

TITLE: On the Theory of the Corpuscular Structure of the Adsorbents. The Capillary Condensation and the Hysteresis of Sorption in Interspaces Between Regularly Packed Spheres (K teorii korpuskulyarnoy struktury adsorbentov. Kapillyarnaya kondensatsiya i sorbtsionnyy gisterezis v zazorakh mezhdu pravil'no upakovannymi sharami).

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 12, pp. 2635-2643 (USSR)

ABSTRACT: The authors undertook a theoretical description of the capillary condensation and especially of the capillary condensation hysteresis in systems of spherical particles with various packages. The treatise comprises 3 stages: 1.) Computation of capillary condensation in model systems of correctly packed spheres. 2.) Computation of the capillary condensation and polymolecular adsorption taking place commonly in these systems. 3.) Analysis of possible deviations of these computations for systems with disordered package of the spheres, and a comparison of the results obtained with the test data. The present report gives the results of the first stage of investigation: 1.) An idea is given on the pores existing between the spheres in the case of correct packing with the coordination numbers 12, 8, 6 and 4. 2.) The capillary condensation in systems of spherical particles in

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

On the Theory of the Corpuscular Structure of the Adsorbents. The Capillary Condensation and the Hysteresis of Sorption in the Interspaces Between Regularly Packed Spheres 76-12-5/27

contact consists essentially of the vapor condensation round the sphere contact points and the intermittently filling of the narrowed intervals between the particles. This filling subsequently disperses in the remaining pore space. The reason for the development of the hysteresis at vapor condensation and with the vaporation of the fluid in such systems is shown. 3.) With a packing with the coordination number 4, the capillary condensation (without polymolecular adsorption) is limited to one stage. It is the stage of reversible filling of the space round the contact points of the spheres. 4.) Computations of the isotherms with the capillary condensation of the nitrogen vapors in packings of spherical silica particles with a diameter of 100, 200 and 400 Å, as well as coordination numbers 12, 8, 6 and 4 were carried out. There are 8 figures, 1 table, and 16 references, 7 of which are Slavic.

ASSOCIATION: Moscow State University imeni M.V.Lomonosov (Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova).

SUBMITTED: July 11, 1956

AVAILABLE: Library of Congress

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.P.

RADUSHKEVICH, L.V.

24(6) 13 PHASE I BOOK EXPLOITATION SOV/1408

Soveshchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Narumova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR; Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Agrophysical" Institute, and others. Introductory remarks were made by Professor N.A. Toropov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

PART II. ADSORPTION METHODS OF STUDYING STRUCTURE AND THE RESULTS OF THEIR APPLICATION

A. Investigation of Systems Consisting of Spherical Particles

Kiselev, A.V. (Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova i Institut fizicheskoy khimii AS SSSR - Moscow State University imeni M.V. Lomonosov and Institute of Physical Chemistry, AS USSR). Corpuscular Structure of Adsorbent-Gels 47

Radushkevich, L.V. (Institut fizicheskoy khimii AS SSSR-Institute of Physical Chemistry, AS USSR). Capillary Condensation of Vapors in Systems of Spherical Particles 60

Karnaukhov, A.P. (Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova-Moscow State University imeni M.V. Lomonosov). Capillary-Condensation Hysteresis in Systems of Locally Packed Spheres 71

Card 3/9

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.P.

"Structure and properties of porous materials" edited by D.H.Everett, F.S.Stone. Reviewed by A.P.Karnaukhov. Koll.zhur. 22 no.1:133-135 Ja-F '60. (MIRA 13:6)

(Porous materials) (Everett, D.H.)
(Stone, F.S.)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

S/069/62/024/005/001/010
B107/B186

AUTHORS: Aristov, B. G., Davydov, V. Ya., Drogaleva, I. V., Karnaukhov, A. P., Kiselev, A. V., Korolev, A. Ya., Polyakov, A. L.

TITLE: The modification of highly dispersed silica aerosil by hydrothermal treatment

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 5, 1962, 513 - 521

TEXT: The influence of temperature and duration of hydrothermal treatment on the aerosil's specific surface area and power to adsorb nitrogen is systematically studied, and some samples were examined by electron microscope. The original material was industrial aerosil prepared by high-temperature hydrolysis of $SiCl_4$ as well as the material ВК-1 (VK-1) prepared by burning off silico-organic compounds. The hydrothermal treatment was accomplished at 120 - 410°C in periods ranging between 4 and 132 hr, after which the samples were dried at 150°C and their adsorption of nitrogen at its boiling point was measured. From this the specific surface area was calculated by the BET method. Results in

Card 1/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

Table 1 show that the specific surface diminishes with increasing temperature and duration of hydrothermal treatment. Electron microscope exposures showed that this is due to coarsening of the particles. If the absolute amount of adsorption is plotted against p/p_s (where p_s is the saturation vapor pressure of the nitrogen) a very reproducible isotherm is obtained (Table 2). Within the range $p/p_s = 0.015 - 0.3$ this can be represented by the BET equation: $\alpha = \frac{\alpha_m Cp/p_s}{(1-p/p_s)[1+(C-1)p/p_s]}$ with $\alpha_m = 10.25\ \mu mol/m^2$, $C = 164$. In the range $p/p_s = 0.2 - 0.8$ the isotherm conforms to Halsay and Hill (references see below). As formulated by Pierce (reference see below) this reads $(\alpha/\alpha_m)^{2.75} = (\alpha/10.25)^{2.75} = 1.30/\log(p/p_s)$. It is pointed out that this isotherm makes it possible to determine the specific surface area of a nonporous or large-pore silica with hydrated surface area from a single experimentally fixed point, according to the equation $s = a/\alpha\ m^2/g$ (a being the adsorption in $\mu mol/g$ and α the value of the isotherm for the same p/p_s). There are

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

6 figures and 2 tables. The most-important English-language references are: G. D. Halsay, J. Chem. Phys., 16, 931, 1948; T. L. Hill, J. Chem. Phys., 17, 590, 1961; C. Pierce, J. Phys. Chem., 63, 1076, 1959; 64, 1184, 1960.

ASSOCIATION: Moskovskiy universitet, Khimicheskiy fakul'tet (Moscow University, Division of Chemistry)

SUBMITTED: September 9, 1961

Table 1. Specific surface area (m^2/g) of aerosil in dependence on temperature and duration of hydrothermal treatment in an autoclave. The specific surface area of the initial aerosil was 187 m^2/g.
Legend: 1. Temperature in ^{o}C; 2. Duration of treatment in hr; 3. Specific surface area in m^2/g.

Table 2. Absolute amount of nitrogen gas adsorbed, at its boiling point, on hydrated samples of nonporous amorphous silica. The surface area covered by a molecule of nitrogen corresponding to a monolayer of (ω_m) thickness is put at 16.2 Å and the degree of filling $\vartheta = \alpha/\alpha_m$, wherefrom

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

α_m, the capacity of the monolayer works out as $1/\alpha_m = 10.25$ μmol/m^2.

Legend: 1. α, μmol/m^2.

Table 1

Температура, °C	Время обработки, часы: 4	8	19,5	132
	Удельная поверхность, м²/г			
120	177	187	174	160
200	158	—	142	104
275	120	132	111	46
350	60	—	50	33
410	—	—	25	—

Table 2

p/p_s	α, мкмоль/м²	$\theta = \frac{\alpha}{10,25}$	p/p_s	α, мкмоль/м²	$\theta = \frac{\alpha}{10,25}$	p/p_s	α, мкмоль/м²	$\theta = \frac{\alpha}{10,25}$
0,00003	2,00	0,195	0,0013	4,57	0,446	0,260	13,40	1,307
0,00005	2,25	0,220	0,0024	5,00	0,488	0,300	14,00	1,366
0,00008	2,50	0,244	0,0037	5,40	0,527	0,350	14,70	1,434
0,00010	2,65	0,259	0,0055	5,90	0,575	0,400	15,30	1,493
0,00013	2,85	0,278	0,0075	6,45	0,629	0,450	16,50	1,610
0,00017	3,05	0,298	0,0095	6,70	0,654	0,500	17,25	1,683
0,00020	3,20	0,312	0,014	7,40	0,722	0,550	18,05	1,761
0,00023	3,30	0,322	0,025	8,30	0,810	0,600	19,00	1,854
0,00027	3,40	0,332	0,040	9,00	0,878	0,650	20,10	1,961
0,00031	3,50	0,341	0,060	9,80	0,956	0,700	21,30	2,078
0,00037	3,60	0,351	0,080	10,30	1,005	0,750	22,70	2,215
0,00043	3,70	0,361	0,100	10,80	1,054	0,800	24,40	2,380
0,00051	3,82	0,373	0,130	11,40	1,112	0,850	26,50	2,585
0,00060	3,94	0,384	0,160	11,90	1,161	0,900	30,30	2,956
0,00075	4,13	0,403	0,190	12,40	1,210	0,950	37,65	3,673
0,00095	4,35	0,424	0,220	12,80	1,249			

Card 4/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.P.

Adsorption methods for measuring the specific surface and pore structure of catalysts. Kin.i kat. 3 no.4:583-598 Jl-Ag '62. (MIRA 15:8)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.
(Catalysts) (Porous materials) (Adsorption)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ARISTOV, B.G.; KARNAUKHOV, A.P.; KISELEV, A.V.

Theory of the corpuscular structure of adsorbents. Part 3: Simultaneous adsorption and capillary condensation. Zhur.fiz.khim. 36 no.10:2153-2161 O '62. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ARISTOV, B.G.; KARNAUKHOV, A.P.; KISELEV, A.V.

On the corpuscular theory of the structure of adsorbents. Pt. 4. Zhur. fiz. khim. 36 no.11:2486-2490 N'62. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

ARISTOV, B. G.; DAVYDOV, V. Ya.; KARNAUKHOV, A. P.; KISELEV, A. V.

Corpuscular theory of the structure of adsorbents. Part 5: Adsorption of nitrogen and carbon tetrachloride vapors on model adsorbents obtained by compression of aerosils. Zhur. fiz. khim. 36 no.12:2757-2763 D '62. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova i Institut fizicheskoy khimii AN SSSR.

(Adsorbents) (Nitrogen) (Carbon tetrachloride)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

BUYANOVA, N. Ye.; GUDKOVA, G.B.; KARNAUKHOV, A.P.

Determination of the specific area of solids by the argon thermal desorption method. Kin. i kat. 6 no. 6:1085-1091 N-D '65 (MIRA 19:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR. Submitted June 7, 1965.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

CA

2

The solubility isotherm of the ternary system sodium nitrate-ammonium nitrate-water at 25°. A. S. Karnaukhov (Yaroslav State Pedagog. Inst.). *Doklady Akad. Nauk S.S.S.R.* 81, 503-5(1951).—The isotherm consists of 3 branches. The 1st corresponds to $NaNO_3$ as the solid phase and ends at the transition point $NaNO_3$ 29.41, NH_4NO_3 45.52, H_2O 26.07 wt. %. Along the 2nd branch, the solid phase is the new compd. 2 $NaNO_3.NH_4NO_3$, tetragonal, identified by microscopic examn. That branch ends at the transition point $NaNO_3$ 21.02, NH_4NO_3 48.23, H_2O 30.75%. The 3rd branch corresponds to a ppt. of pure orthorhombic β-NH_4NO_3. The thermogram of the binary compd. 2 $NaNO_3.NH_4NO_3$ shows an exothermal effect at 285-320°, evidently corresponding to decompn. into the simple salts (which show no such exothermal effect). N. Thon

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

USSR/Chemistry - Explosives, Perchlorates 11 Jun 52

"Solubility Diagram of the Ternary System $NaClO_4$ - NH_4ClO_4 - H_2O at 25°," A. S. Karnaukhov, I. G. Druzhinin, Yaroslavl State Pedagogical Inst imeni K. D Ushinskiy

"Dok Ak Nauk SSSR" Vol LXXXIV, No 5, pp 963 - 966

A diagram of straight-line coordinates was constructed for the interaction of sodium and ammonium perchlorates in aq soln. The curve consists of 3 branches: one for the crystn of the anhydrous ammonium perchlorate, one for the solid soln $7NH_4ClO_4 \cdot NaClO_4$ and sodium perchlorate, and one for the sepn into the solid phase

223T12

of sodium perchlorate monohydrate. This isotherm differs sharply from that obtained by Freeth who plotted only 5 points. This curve has 25 points. Presented by Acad I. I. Chernyayev 9 Apr 52.

KARNAUKHOV, A.S.

223T12

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

USSR.

Solubility diagram for the ternary system $(NH_4)_2SO_4$-$ZnSO_4$-H_2O at 35°. A. S. Karnaukhov and V. G. Shevchuk (K. D. Ushinskii State Pedagog. Inst., Yaroslav). *Doklady Akad. Nauk S.S.S.R.* 90, 191-4(1953).—The ternary system $(NH_4)_2SO_4$-$ZnSO_4$-H_2O was studied at 35° by the isothermal method (cf. *C.A.* 48, 7414*d*). Equil. was reached after 18-20 hrs. after which time samples were taken for analysis. The soly. diagram of this system has 3 branches. The binary compd. $ZnSO_4.(NH_4)_2SO_4.0H_2O$ was isolated and its microstructure and *n* were detd.

J. Rovtar Leach

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. S.

USSR

Solubility diagram of the ternary system KNO_3-NH_4NO_3-H_2O at 25°. A. S. Karnaukhov and O. S. Zotova (K. D. Ushinskii State Pedagog. Inst., Yaroslav.). *Doklady Akad. Nauk S.S.S.R.* 90, 549-51(1953).—The soly. of the above system is shown graphically at 25°. The system shows 3 branches; sepn. of solid solns. of KNO_3 and $3KNO_3.NH_4NO_3$, with indication that KNO_3 tends to crystallize with isomorphous absorption of the double salt, is noted. A transition point is observed at KNO_3 22.73%, NH_4NO_3 43.18%, H_2O 34.09%. The 2nd branch corresponds to sepn. of $3KNO_3.NH_4NO_3$, and the 3rd branch corresponds to sepn. of solid solns. of $3KNO_3.NH_4NO_3$ isomorphously taken up by NH_4NO_3. Thus the system is that of a binary compd. with bilateral solid solns.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

Aqueous mutual system from perchlorate and nitrate salts of ammonia and sodium at 25°. A. S. Karnaukhov (State Pedagog. Inst., Yaroslavl). *Izvestiya Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 25, 334–44(1954).—Soly. of this system was studied, as were the triple systems entering into this mutual system: $NaNO_3$–NH_4NO_3–H_2O; NH_4NO_3–NH_4ClO_4–H_2O; $NaNO_3$–$NaClO_4$–H_2O; $NaClO_4$–NH_4ClO_4–H_2O. These systems are characterized by sepn. of a series of solid phases, consisting of compds. $NaNO_3$, NH_4NO_3, NH_4ClO_4, $2NaNO_3.NH_4NO_3$, $7NH_4ClO_4$, $NaClO_4$, $NaClO_4.H_2O$, and of solid solns. NH_4NO_3, NH_4ClO_4, $NaClO_4$, and $7NH_4ClO_4.NaClO_4$. Cryst. $2NaNO_3.NH_4NO_3$ is much different from the original salts and is characterized by tetragonal syngony with beveled angles at the diagonal, and by specific thermal effects at 285° and 320°, corresponding to decompn. of this compd. The isotherm of soly. of the system NH_4NO_3–NH_4ClO_4–H_2O is characterized by sepn. of uniform solid solns., that of system $NaNO_3$–$NaClO_4$–H_2O (at 25°) is characterized by 3 branches of cryst.s., corresponding to solid phases: $NaClO_4.H_2O$, $NaClO_4$, and $NaNO_3$. The isotherm of soly. of the system $NaClO_4$–NH_4ClO_4–H_2O at 25° is characterized by sepn. of 3 solid phases: NH_4ClO_4, solid solns. of $7NH_4ClO_4.NaClO_4$ in $NaClO_4$, and $NaClO_4.H_2O$. Eurilla Mayerle

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

Solution of metals in their chlorides. G. G. Urazov and A. S. Karnaukhov. *Doklady Akad. Nauk S.S.S.R.* 96, 555-8 (1954).—The systems Pb-$PbCl_2$ and Cd-$CdCl_2$ were first discussed by Lorenz and Kaufler (1909) in investigations on "metal clouds"; they are important for the general problem of the existence of "subchlorides." The phase equil. expts. by thermal analysis (cooling curves, recorded by Kurnakov's double galvanometer) show clearly that fused metallic Pb is dissolved in $PbCl_2$ melts with a max. concn. of 13 mol. % Pb. In the system Cd-$CdCl_2$, however, a subchloride CdCl is formed which is stable in the melt between 520 and 550°, but dissocs. at temps. above 550° to Cd + $CdCl_2$. The relatively high vapor pressure of the chlorides makes the use of sealed SiO_2 glass containers necessary. Metal clouds appear if the 2 miscible melts are heated above 500°. The existence of univalent Cd in its analogy with univalent Hg was indicated by Mendeleev, although Aten (*C. r.* 4, 2900) demonstrated that there are considerable distinctions in the properties of both elements concerning the stability of the uni- and bivalent states in the chlorides.

W. Eitel

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

Karnaukhov, A. S.

Solubility of the ternary system NH_4ClO_4-$(NH_4)_2SO_4$-H_2O at 25°. A. S. Karnaukhov and Z. G. Karov. *Uchenye Zapiski Kabardin. Gosudarst. Pedagog. Inst.* 1955, No. 8, 61-71.—The soly. viscosity, d., n, and the surface tension of the system NH_4ClO_4-$(NH_4)_2SO_4$-H_2O were detd. at 25 ± 0.1°. The soly. curve consists of 2 branches in equil. with the solid phase NH_4ClO_4 and $(NH_4)_2SO_4$ intersecting at the eutectic conte. NH_4ClO_4 3.06 and $(NH_4)_2SO_4$ 40.81 wt. %. The viscosity, d., and n increased continuously with the concn. of $(NH_4)_2SO_4$ and the surface tension passed through a flat min. at 3.03-15.8% $(NH_4)_2SO_4$ and 15.01-10.35% NH_4ClO_4.

I. Bencowitz

gl

MT

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

12373* (Russian.) Study of the Substitution Reaction 2AgCl + Pb ⇄ $PbCl_2$ + 2Ag by the Method of Thermal Analysis of the Ternary System Ag-Pb-Cl. **Issledovanie reaktsii zamesh-chenila 2 AgCl + Pb ⇄ $PbCl_2$ + 2 Ag metodom termiche-skogo analiza troinoi sistemy Ag-Pb-Cl.** G. G. Urazov and A. S. Karnaukhov. *Zhurnal Neorganicheskoi Khimii*, v. 1, no. 4, 1956, p. 753-756.

Fusibility diagram of the trapezoidal portion of the system. Temperatures of primary crystallization and of the crystallization of the eutectic. Solubility of metallic lead in lead chlorides, and similar data.

Chem 2

3

0

8

8.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

Physicochemical analysis at 25° of the ternary systems: $NaNO_3$ -- NH_4NO_3 -- H_2O, KNO_3 -- NH_4NO_3 -- H_2O, and $RbNO_3$ -- -- NH_4NO_3 -- H_2O. Zhur.ob.khim. 26 no.4:1027-1034 Ap '56. (MLRA 9:8)

1. Yaroslavskiy gosudarstvenny pedagogicheskiy institut. (Nitrates)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. S.

27 27

5

1-4E4

1-4E3d

Solubility in the ternary system $KClO_3$-$NaClO_3$-H_2O at 0 and 25°. A. S. Karnaukhov and A. V. Mazin (K. D. Ushinskii State Pedagog. Inst., Yaroslavl). Zhur. Neorg. Khim. 2, 810-14(1957).—The 0° and 25° soly. isotherms are characterized by 2 branches of crystn. For the 0° isotherm the 1st branch corresponds to the crystn. of $KClO_3$ and the 2nd to the crystn. of solid soln. of $KClO_3$ and $NaClO_3$. For the 25° isotherm the branch for the solid soln. disappears completely leaving only the branches for the crystn. of the 2 pure salts.

J. Rovtar Leach

MT

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A. S.

6
1-4E4j
1-4E3d

Aqueous reciprocal system of the chlorates and nitrates of [illegible] and potassium at 25°. A. S. Karnaukhov (K. D. Ushinskii State Pedagog. Inst., Yaroslavl). Zhur. Neorg. Khim. 2, 915-27(1957).—The ternary systems that make up the reciprocal system (KNO_3-NH_4NO_3-H_2O; NH_4ClO_3-NH_4NO_3-H_2O, $KClO_3$-NH_4ClO_3-H_2O, and KNO_3-$KClO_3$-H_2O) were studied. They are characterized by the sepn. of the compd. $3KNO_3$-NH_4NO_3 (I) and of solid solns. formed by the nitrate and chlorate salts as well as by solid solns. of I with these salts. I crystallizes in the form of regular tetrahedra. The 25° soly. isotherm for the system $KClO_3$-NH_4ClO_3-H_2O is characterized by 2 branches of crystn. corresponding to 2 types of solid solns. The soly. isotherms for the systems NH_4NO_3-NH_4ClO_3-H_2O and KNO_3-$KClO_3$-H_2O are characterized by the formation of continuous solid solns.

J. Rovtar-Leach

NS

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

MAKIN, A.V.; KARNAUKHOV, A.S.

Solubility of the ternary system $NaNO_3$ -- Na_2HPO_4 -- H_2O at 25°.
Zhur.neorg.khim. 2 no.6:1420-1423 Je '57. (MIRA 10:10)

1.Yaroslavskiy gosudarstvennyy pedagogicheskiy institut im. K.D. Ushakova.
(Solubility) (Systems (Chemistry))

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

5(4)

AUTHOR: Karnaukhov, A. S.,

SOV/153-58-3-6/30

TITLE: The Solubility in Ternary Systems $NaClO_4$-$NaCl$-H_2O, $KClO_4$-KCl-H_2O and NH_4ClO_4-NH_4Cl-H_2O at 20° (Rastvorimost' v troynykh sistemakh $NaClO_4$-$NaCl$-H_2O, $KClO_4$-KCl-H_2O i NH_4ClO_4-NH_4Cl-H_2O pri 20°)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp 34 - 39 (USSR)

ABSTRACT: Potassium and ammonium perchlorate are widely used as a oxygen source and as oxidizers. The investigation of their solubility in the presence of chlorides is necessary for the determination of their manufacture conditions. These conditions are described. The investigations were performed by means of the isothermal method (Ref 8) at 20°. The analysis of the salts produced for test purposes showed a purity degree of from 99.41 to 99.63%. The equilibrium in the systems investigated was attained at 20°: in the

Card 1/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

The Solubility in Ternary Systems $NaClO_4$-NaCl-H_2O SOV/153-58-3-6/30
$KClO_4$-KCl-H_2O and NH_4ClO_4-NH_4Cl-H_2O at 20°

system $NaClO_4$-NaCl-H_2O after 48 hours, in the system $KClO_4$-KCl-H_2O after 5-6 days, in the system NH_4ClO_4-NH_4Cl-H_2O after 24-28 hours. After expiration of these periods samples were taken for the analytical determination. The solubility of the pure salts at 20° was first determined. It was: $NaClO_4$-66.84%, NH_4ClO_4-18.69%, $KClO_4$-1.72%, KCl-26.96% and NH_4Cl-27.82%. The isothermal lines of all 3 systems (Tables 1-3, Figs 1-3) were studied by the author for the first time. The system of sodium and ammonium salts neither form compounds nor solid solutions. The system of potassium perchlorate and potassium chloride forms limited solid solutions (about 5%) of the $KClO_4$ in the KCl crystals. The pure preparation of potassium perchlorate can be produced only if the concentration of potassium chloride in a saturated

Card 2/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

The Solubility in Ternary Systems $NaClO_4$-$NaCl$-H_2O $KClO_4$-KCl-H_2O and NH_4ClO_4-NH_4Cl-H_2O at 20° SOV/153-58-3-6/30

solution does not exceed 24.52%. Ammonium perchlorate can only be isolated in the system NH_4ClO_4-NH_4Cl-H_2O at 20°, if the content of ammonium chloride in the saturated solution does not exceed 24.92%. There are 3 figures, 3 tables, and 9 references, 2 of which are Soviet.

ASSOCIATION: Yaroslavskiy pedagogicheskiy institut (Yaroslavl' Pedagogic Institute) Kafedra khimii (Chair of Chemistry)

SUBMITTED: September 19, 1957

Card 3/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.; MIZERA, M.; PALAUSH, R.

Photometric determination of strontium. Zhur.anal.khim. 15 no.4:502 Jl-Ag '60. (MIRA 13:9)

1. Higher Pedagogical School, Praga, Chechoslavakia.
(Strontium--analysis)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.S.

M.V.Lomonosov as chemist. Dokl. na nauch. konf. 1 no.4:7-14 '62. (MIRA 16:8)
(Lomonosov, Mikhail Vasil'evich, 1711-1765) (Chemistry)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

KARNAUKHOV, A.V., starshiy prepodavatel'

Strip preparation of soils in cutover areas using the D-210 G grubber in Krasnoyarsk Territory. Trudy STI 37:176-181 '64. (MIRA 18:5)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1

CA KARNAUKHOV, B.G.

15

The absorption of phosphorus pentoxide by Priazov chernozem under conditions of different methods of applying superphosphate. B. G. Karnaukhov (V. M. Molotov State Univ., Rostovskii). *Pochvovedenie* 1951, 362-7.—Granular versus powdery forms of superphosphate comparisons show that the latter is superior if applied just prior to planting of tomatoes. If the superphosphate is to be applied long before planting the granular forms seem to be better. J. S. Joffe

1952

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720810011-1"