"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/020/63/148/001/032/032
B101/B186

Surface properties of melts ...

between the electrodes I and II and a platinum electrode III placed on the melt surface: $\Delta\varepsilon'' = \varepsilon_{III} - \varepsilon_{I} = 150$ mv; $\Delta\varepsilon' = \varepsilon_{III} - \varepsilon_{II} = 90$ mv. The electrodes were in a nitrogen stream. The surface potential of the CaF_2 + 26% CaO melt was found to be more negative by 28 mv than that of CaF_2. Addition of 15% by weight of Al_2O_3 reduced $\Delta\varepsilon_w$ almost to zero. Addition of SiO_2 to CaF_2 was without effect on σ. Simultaneous addition of different oxides to CaF_2 increased σ. Measurements of the interfacial tension σ_{int} between chrome-nickel- and iron-chrome alloys on the one hand and CaF_2 + oxides on the other hand showed also a parallelism between σ_{int}, σ, and the ionic fraction of oxygen. The metal surface at the melt interface was negatively charged. From the parallelism between σ_{int} and σ, a constant adhesion effect between metal and oxide-fluoride melts is inferred: $W = \sigma + \sigma' - \sigma_{int}$, where σ' is the surface tension between metal and gas. There are 2 tables.

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOTNIKOV, A.I.; YESIN, O.A.; NIKITIN, Yu.P.

Chemical polarization at high temperatures. Dokl. AN SSSR 152 no.5:1173-1176 O '63. (MIRA 16:12)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova. Predstavleno akademikom A.N.Frumkinym.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

ACCESSION NR: AT4030806 S/0000/63/000/000/0242/0245

AUTHOR: Nikitin, Yu. P.

TITLE: Properties of the boundary between heat resistant alloys and welding flux

SOURCE: AN UkrSSR. Institut metallokeramiki i spetsial'ny*kh splavov. Poverkhnostny*ye yavleniya v rasplavakh i protsessakh poroshkovoy metallurgii (surface phenomena in liquid metals and processes in powder metallurgy). Kiev, Izd-vo AN UkrSSR, 1963, 242-245

TOPIC TAGS: heat resistant alloy, weld flux, weld seam, surface tension, calcium fluoride, calcium oxide, silica, alumina

ABSTRACT: In this paper the author investigated the separation boundary between some welded metal alloys and the weld flux. At first, the dependence of the surface tension of the flux on its composition was studied by means of the lying drop method. The results are presented in tables. It was found that the addition of different oxides to CaF_2 increases the surface tension; CaO has the greatest affect. Conversely, small additions of SiO_2 or Al_2O_3 have almost no affect on the surface tension. The simultaneous introduction of calcium oxide and aluminum oxide, as well as calcium oxide, magnesium oxide, silicon dioxide, and aluminum oxide, leads to a

Card 1/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

ACCESSION NR: AT4030806

significant growth in the tension. The results of the interphase tension of heat resistant alloys on the boundary with the fluxes and the density of the electrical charge on the surface of the metal in contact with the flux are presented in tables. It is found that the quality of the weld seam is determined, to a considerable degree, by the properties of the boundary of the welded metal with the flux. Orig. art. has: 3 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk (Ural Polytechnic Institute)

SUBMITTED: 23Nov63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIK[illegible], Yu. [illegible]

Investigation [illegible] of the [illegible] between [illegible] metal and [illegible] by electrochemical methods. Ubor. [illegible] Ural. p[illegible] [illegible] no.1[illegible] [illegible]

1. Redaktor [illegible] politekhnicheskogo [illegible] [illegible]

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.P.; SMIRNOV, [illegible]; [illegible], V.I.; [illegible], [illegible].

Behavior of iron oxides during the interaction of iron with an enamel melt. Sbor. nauch. trud. Ural. politekh. inst. no.126: 59-67 '63 ([illegible])

1. Redaktor zhurnala [illegible] nauchnykh trudov Uralskogo politekhnicheskogo instituta imeni [illegible] (for Nikitin).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.P.; SAFONNIKOV, A.N.

Surface properties of welding fluxes. Sbor. nauch. trud. Ural. politekh. inst. no.126:68-72 '63 (MIRA 17:8)

1. Redaktor zhurnala "Sbornik nauchnykh trudov Ural'skogo politekhnicheskogo instituta imeni S.M. Kirova" (for Nikitin).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

YESIN, O.A., SOTNIKOV, A.I.; N[illegible], Y[illegible].

Temperature dependence [illegible] oxides. Dokl. AN SSSR 158 no.5:1149-1151 O '64. (MIRA 17:10)

1. Ural'skiy politekhnicheskiy institut im. [illegible], [illegible] akademikom A.N.Frumkinym.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOTNIKOV, A.I. (Sverdlovsk), YESIN, O.A. (Sverdlovsk); NIKITIN, Ye.P. (Sverdlovsk)

Studying the kinetics of the desulfuration of cast iron by slag, by the method of alternating current polarization. Izv. AN SSSR. Met. no.1:32-38 Ja-F '63. (MIRA 16:5)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

KRYUK, V.I.; NIKITIN, Yu.P.; SHABALINA, R.I.

Dissolution kinetics of an iron-base alloy in liquid mattes. TSvet.met. 38 no.3:33-35 Mr '65. (MIRA 18:6)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

ALEKPEROVA, S.A.; DZHAVADOV, S.P.; NIKITIN, Yu.S.

Structural-sorption characteristics of clays of some deposits of Azerbaijan S.S.R. Azerb.khim.zhur. no.4:51-57 '65. (MIRA 18:12)

1. Azerbaydzhanskiy gosudarstvennyy universitet imeni Kirova. Submitted January 29, 1965.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

N. K. Tin, Yu. S.

7

3

Enhancement of the adsorption of organic substances from aqueous solutions by a decrease in the pore size of active carbons. A. V. Kiselev, Yu. S. Nikitin, and Yu. A. [illegible] [illegible] M. V. Lomonosov [illegible] [illegible] [illegible] [illegible] adsorbents were compared, viz. nonporous C (I), large pore C (II) from sucrose and 5 parts ZnCl₂, medium pore C (III) [illegible] from peat. When the adsorption [illegible] H_2O on the I adsorbents were made to coincide at c/c_s = 0.1 [illegible] equil. concn., c_s = soly.), the isotherms on I to III were almost identical at c/c_s < 0.1, whereas at c/c_s < 0.1 adsorption decreased from II to III to I. The relative adsorption on IV [illegible] greater than on I [illegible] [illegible] multilayer adsorption and capillary condensation [illegible] small). Literature data showed that also for BuOH, hexanol, and $PrCO_2H$ the relative adsorption at c/c_s < 0.1 [illegible] 0.075 was greater for fine-pore C (V) than for I, and that the concn. of the max. adsorption of EtOH and PrOH from H_2O was smaller for V than for graphite. [illegible] Bikerman

PM

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

10.13

27

Structure changes in the aluminum silicate catalyst studied by adsorption and electron-microscope investigations. A. V. Kiselev, R. A. Lepuslev, V. M. Luk'yanovich, and Yu. E. Nikitin (Inst. Petroleum Ind., Inst. Phys. Chem., and M. V. Lomonosov State Univ., Moscow). Zhur. Fiz. Khim. 30, 2146-58 (1955).—Structural changes were investigated in 2 spherical Al silicate catalysts, made by calcining the catalysts at 900° for 6 hrs., and by steam-heating them at 750° for 24 hrs., by studying the adsorption-desorption curves of MeOH and C_6H_6, and by electron-microscopic investigation at 11,000-29,000 magnifications of the samples. The porosity was tested by the B.E.T. method. Heating at 900°, reduces the sp. surface and the porosity of the catalyst, without affecting appreciably the pore size. Steaming greatly reduces the sp. surface and enlarges the pore size. The primary components of the catalyst structure become much larger, smoother, and more uniform; the heat-treatment at 900° lowers the "energetic" const. of the adsorption isotherm of benzene vapors, whereas prolonged steam-treatment increases that const.; this is attributed to a further dehydration during the calcination, and a partial hydration during the steam-treatment. W. M. Sternberg

11

21

RM

fra
MT

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu. S.

Effect of thermal and steam treatment on the structure and adsorbing properties of aluminosilicate catalyst. Yu. S. Nikitin (All-Union Sci. Research Inst. Petroleum Reprocessing, Natural Gas and Synthetic Liquid Fuel, Moscow). *Poverkhnost. Khim. Sorbtsiya i Rol' v Yavleniyakh Adsorbtsii, Sbornik Trudov Konferentsii. Adsorbtsii* 1957, 170-4.—Spherical Al_2O_3-SiO_2 catalyst was used in studying adsorption isotherms of MeOH and water at 20°. In order to evaluate the effects of regeneration on the sintering and other changes in the phys. structure of surface, the catalyst was regenerated either in a stream of air at 900° passed through a quartz furnace for 6 hrs. with a vol. rate of 100 hr.$^{-1}$, or in 100% steam (100 volumes/vol. catalyst/hr.) at 750° for 24 hrs. From the difference in the adsorption isotherms before and after the treatment, it was seen that the specific surface and, proportionally, the total vol. of pores have decreased after the thermal treatment without any significant change in the size of pores. In the instance of the steam treatment, the total vol. of pores decreased at a slower rate than did the specific surface area; at the same time the size of pores considerably increased. After prolonged steam treatment, the original fine pores were completely destroyed, and in their place were formed new wide pores. Thus, the d. specific surface area, vol. of pores, effective diam. of pores, diam. of particles, and the energy const. from the equation for the adsorption isotherm of the catalyst, before treatment, after thermal treatment, and following steam treatment after one hr., 12 hrs., and 24 hrs., were: 0.73 g./cc., 380 sq. m./g., 0.50 cc./g., 40 A., 70A., 5.7; 0.90, 210, 0.28, 42, 120, 2.8; 0.74, 245, 0.42, 67, 105, —; 0.87, 145, 0.32, 120, 180, —; and 0.90, 90, 0.28, 140, 200, 11.

A. P. Kotloby

4

4E4j-1

1/1

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

GURENKOV, B.S.; MAKEYEVA, Ye.D.; NIKOLAYEVA, I.N.; NIKITIN, Yu.S.

Lubricating greases obtained by the thickening of lubricating oils with silica gel and silica alumina gel. Trudy VNII NP no.7:389-403 '58. (MIRA 12:10)
(Lubrication and lubricants)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/65-58-12-6/16

AUTHORS: Kiselev, A. V. and Nikitin, Yu. S.

TITLE: The Effect of Thermal and Vapour Treatment on the Structure and Catalytic Activity of Aluminium Silicate Bead Catalysts (Vliyaniye termicheskoy i parovoy obrabotok na strukturu i kataliticheskuyu aktivnost' sharikovykh alyumosilikatnykh katalizatorov)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12, pp 27 - 32 (USSR)

ABSTRACT: Thermal over-heating and the action of water vapour constitute serious factors during the poisoning of aluminium silicate catalysts and cause a decrease in the activity and structural changes of the same (Ref. 1 - 7). Variations in the catalytic activity due to piercing of the catalysts at high temperatures, and their treatment with vapour, were compared with changes in their porous structure. Five bead catalysts with similar chemical composition were tested. They were subjected to calcination and vapour treatment in an air current. These tests were carried out in a vertical kiln in a quartz reactor. Adsorption and desorption isotherms of methanol at 20°C were determined for each sample. The structural characteristics of the

Card 1/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/65-58-12-6/16

The Effect of Thermal and Vapour Treatment on the Structure and Catalytic Activity of Aluminium Silicate Bead Catalysts

catalysts were calculated from these isotherms. The catalytic activity was evaluated after cracking of a kerosine-gas-oil fraction of Artem-Malgobek petroleum at 450°C; the experiment was carried out for 30 minutes. A table gives data on the structural characteristics of the catalyst as well as yields of gasoline, (fraction up to 200°C), gas, coke and on the rate of conversion. Structural changes during thermal treatment differ largely from those observed during vapour treatment. Calcination of the catalyst at temperatures above 750°C causes a contraction in the specific surface which is approximately proportional to the contraction of the pore volume. The dimensions of the pores do not change. A slighter decrease in the volume of the pores is observed during vapour treatment, but the dimensions of the pores increase rapidly (Fig.1). Equations for calculating these parameters are given. Variations in the activity of the catalysts (viz Table) also point to a sharp decrease in the cracking activity of aluminium silicate catalysts. The depth of conversion

Card 2/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/65-58-12-6/16

The Effect of Thermal and Vapour Treatment on the Structure and Catalytic Activity of Aluminium Silicate Bead Catalysts

by heat- and vapour-treated catalysts was also compared. Large-grain heat- and vapour-treated catalysts had approximately the same effect (depth of conversion equals $0.20 - 0.31 \times 10^{-2}$). Fine-grain catalysts are less effective (depth of conversion equals approximately 0.22×10^{-2}). Equations are derived for calculating the depth of conversion and it is suggested that alterations in the activity of the catalysts are connected with variations in the weight of 1 m^3 of dry granular material (Fig.2). At equal deposition the activity of the sample, calcinated at high temperatures is considerably higher than the activity of samples treated with vapour at 750°C. During vapour treatment the specific surface decreases at a much faster rate than the deposition of the catalyst; therefore, the activity of the vapour-treated catalyst decreases much quicker than

Card 3/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/65-58-12-3/16

The Effect of Thermal and Vapour Treatment on the Structure and Catalytic Activity of Aluminium Silicate Bead Catalysts

that of the heat treated catalyst. There are 2 Figures, 1 Table and 17 References: [illegible] Soviet and 9 English.

ASSOCIATION: Khimicheskiy fakul'tet MGU, VNII NP (The Department of Chemistry MGU, VNII NP)

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

5(4) SOV/76-33-4-26/32

AUTHORS: Kaliko, M. A., Nikitin, Yu. S., Fedotova, T. V.

TITLE: The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts (Vliyaniye usloviy prigotovleniya gidrogeley okisi kremniya i okisi alyuminiya na strukturu i aktivnost' smeshannykh alyumosilikatnykh katalizatorov)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 922-929 (USSR)

ABSTRACT: As is known, (Refs 8, 9) the porous structure of silicagels (SG) and aluminum gels (AG) strongly depends on the production technique. It can be expected that with equal content of (AG) the catalysts (C) prepared with hydrogels of different production differ from one another with respect to their properties. In the present case 4 (SG)-types were prepared, differing as to the concentration of the acids used in production and in the preparation conditions - SG-1 (4.36 n H_2SO_4), SG-2 (2.37 n H_2SO_4) SG-10 (1.1 n H_2SO_4), S-25 (0.6 n HCl). The (AG) A-1 and A-2 were precipitated at a lower temperature (8-10°) than A-3 (100°).

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/76-33-4-26/32

The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts

Aluminum silicagel catalysts (AC) were prepared by intermixing the humid (SG) and (AG) and by after-treating and annealing the tablets at 750° during 3 hours. The (SG) strongly differed in their structure (Fig 1 adsorption isotherm of CH_3OH, table 1, structural values). SG-1 is homogeneously fine-porous, SG-2 likewise, although it exhibits larger pores, S-25 and SG-10 are less homogeneous (they were precipitated at a higher pH). The structural properties of AG were likewise determined from methanol adsorption isotherms (Fig 2)(Table 1). A-3 possesses a considerably larger pore volume than A-1 and A-2. By intermixing the different (AG) and (SG) the authors obtained the (AC) having a constant composition (30% Al_2O_3 - 70% SiO_2) and the structural characteristics (Table 2) were determined from the adsorption isotherms of methanol (Fig 3). The catalytic activity of (AC) was evaluated after the cracking of the kerosene-gasoline fraction of an Artem-Malgobek petroleum at determined conditions (Table 3, results of cracking with the 6 various (AC)-types). The experimental results obtained show that in a certain respect the structural properties of the intermixed gels are preserved in the catalyst, in which con-

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SOV/76-33-4-26/32

The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts

nection the fine-porous (C) exhibit the greatest efficiency and the (C) prepared from coarse-porous gels exhibit the least activity. The structural formation of the gels depends on the preparation conditions and may be considered in the same way as the growing of crystals, which also explains various observations made. Thus an enlargement of the specific surface of the coarse porous (C) may be explained by a mutual stabilization of SiO_2 and Al_2O_3 particles in the process of drying and annealing, i.e. an enlargement of the particles is prevented. The catalytic activity may also be determined by the properties of the hydrogels. There are 3 figures, 3 tables, and 16 references, 11 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza (All-Union Scientific Research Institute for Petroleum Refining and Gas Processing)

SUBMITTED: October 3, 1957

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

5(4) SOV/76-33-11-24/47

AUTHOR: Nikitin, Yu.S.

TITLE: Investigation of the Porous Structure and the Catalytic Activity of Ball-shaped Aluminum Silicate Catalysts

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2513-2516 (USSR)

ABSTRACT: Five ball-shaped aluminum silicate catalysts, which were annealed at 750°C, were subjected to after-treatment by vapor at 750°C during different time spans and two of the catalysts were again annealed at higher temperatures. Thus two sample-series were obtained and studied. The adsorption and desorption isothermal lines of methanol vapor at 20°C were plotted (the specific surface, the pore volume, and the pore diameter were determined) and the catalytic activity in the cracking of a kerosene - gasoline fraction of the Artemo-Malgobek petroleum was established. The results of the adsorption measurements (Fig 1, Table) prove that there is a considerable difference between the samples treated with vapor and those processed thermally. The thermal treatment causes a decrease in the specific surface proportional to a decrease in the pore volume (without change in the pore dimensions), while after

Card 1/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu. S., Cand Chem Sci (diss) -- "The porous structure and catalytic activity of aluminum-silicate catalysts". Moscow, 1960. 21 pp (Moscow Order of Lenin State U im M. V. Lomonosov, Chem Faculty), 120 copies (KL, No 10, 1960, 126)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

5.1190

1959
SOV/[illegible]

AUTHORS: Kiselev, A. V., Nikitin, Yu. S.

TITLE: The Effect of Production Conditions of Alumina-Silica Gels on Structure of Their Pores

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, 5, Nr 3, pp 35-42 (USSR)

ABSTRACT: The structure of pores of alumina-silica gels was studied in relation to the amount of Al_2O_3 in catalysts prepared by the alumina method. The results of experiments are shown in Table 1. Four additional samples of alumina-silica gels were prepared from solutions of lower concentration containing two-fold lesser amount of dry substance. The results of analysis of their pores are shown in Table 2. There are 4 figures; 2 tables; and 15 references; 10 Soviet; 5 U.S. The 5 U.S. references are: Plank, C. J., Drake, L. C., J. Coll. Sci., 2, 399 (1947); Plank, C. J., J. Coll. Sci., 2, 413 (1947); Ashley, K. D., Innes, W. B., Ind. Eng. Chem., [illegible], 2,

Card 1/5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

The Effect of Production Conditions of Alumina-Silica Gels on Structure of Their Pores

77935
SOV 65-[illegible]

857 (1952); Elkin, P. B., Sh[illegible], [illegible], [illegible], [illegible], Ind. Eng. Chem., 3[illegible], [illegible] (1945), Tamele, M. W., Third World Petroleum Congress, 1951; Proceedings, Sect. 4, 98, Leiden, Brill (1951).

ASSOCIATION: All-Union Scientific Research Institute of Petroleum Industry and Moscow State University (VNII NP, MGU)

Card 2/5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Table 1. [illegible]
alumina-[illegible] ([illegible]).

B	A C	D	E	F	G
I	1	Silica gel	[illegible]	[illegible]	
	2	1.5	[illegible]	[illegible]	[illegible]
	3	7.9	[illegible]	[illegible]	[illegible]
	4	12.9	[illegible]	[illegible]	[illegible]
	5	14.0	[illegible]	[illegible]	
	6	15.0	475	[illegible]	[illegible]
II	7	25.0	265	(0.35)	
	8	27.0	250	0.46	
	9	30.0	240	0.48	
	10	32.0	250	0.50	
	11	39.0	225	0.47	—
	12	40.0	235	0.46	
III	13	47.0	280	0.38	
	14	56.0	290	0.38	—
	15	58.0	255	0.41	
	16	80.0	285	[illegible]	—

Card 3/5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

The Effect of Production Conditions of Alumina-Silica Gels on Structure of Their Pores

Key to Table . (A) Sample; (B) [illegible]; (C) [illegible]
(D) amount of Al_2O_3, %; (E) [illegible]
(F) volume of pores, [illegible] cm^3/g; (G) [illegible]

Card 4/5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

The Effect of Production Conditions of Alumina-Silica Gels on Structure of Their Pores

77930
SOV/63-60-3-8/19

Table 2. Structural characteristics of alumina-silica gels (additional samples).

A	B	C	D	E
1	Silica Gel	415	1,02	98
2	1,5	355	0,83	70
3	4,0	420	0,66	62
4	9,0	395	0,60	46

Key to Table 2. (A) Sample; (B) amount of Al_2O_3, %; (C) specific surface, s, m^2/g; (D) volume of pores, v, cm^3/g; (E) diam of pores, d, A.

Card 5/5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/065/60/000/008/009/010/XX
E030/E112

AUTHORS: Piguzova, L.I., Nikitin, Yu.S., and Shvartsman, I P

TITLE: Dependence of Pore Structure and Activity of an Alumina/Silica Catalyst on Change in Chemical Composition

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No. 8, pp. 15-21

TEXT: Adsorption isotherms of a series of alumina/silica catalysts have been obtained using methanol. The effect of the chemical composition on the pore size, catalytic activity, and chemical stability, was determined by studying catalysts with alumina contents from 0.5 up to 80%, and it appears to dominate most other effects, including the pore size distribution of the fresh catalyst. The differential pore size distribution of fresh catalyst has three types of behaviour, depending on the chemical composition: for alumina contents greater than 40% it is very uniform, but for smaller contents it has strong peaks, around 40 Å for 15-40% alumina content and around 120 Å for alumina contents between 15 and 1.5%. The effect of subjecting the

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/065/60/000/008/009/010/XX
E030/E112

Dependence of Pore Structure and Activity of an Alumina/Silica Catalyst on Change in Chemical Composition

catalyst to water vapour at 750 °C is always to decrease the pore volume and specific surface area, and shift the differential pore size distribution peaks towards the larger dimensions; the decrease in volume is greatest (55 to 60%) for alumina contents of 30 to 40%. The effect on catalytic activity was judged by the cracking of a straight run benzine and a kerosine/gas oil fraction. No definite correlation was obtained between catalytic activity and specific surface area. The peak in surface area at 15 0% alumina content did not have a correspondingly marked peak in activity, and the minimum in area at 30 40% alumina content had no corresponding minimum in activity so that apart from other conditions known to affect the catalytic activity, the main correlation of activity is with chemical composition. Stability of the catalyst towards 0.1N HCl and alkali at 20 °C was greatest for 40% alumina (where Al-O-Si groups would be dominant) and least at very small or high alumina concentrations

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/065/60/000/008/009/010/XX
E030/E112

Dependence of Pore Structure and Activity of an Alumina-Silica Catalyst on Change in Chemical Composition

(where Al-O-Al or Si-O-Si groups would be dominant) as is confirmed by stability of the catalyst in practical use. These effects are attributable to the differing ionic radii of silica and alumina, the nature of the bond between them, and the degree of coordination of the aluminium.

There are 5 figures, 1 table and 8 references: 7 Soviet (two of which are translations) and 1 English.

ASSOCIATION: VNII NP

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/076/61/035/008/016/016
B110/B101

AUTHORS: Vasil'yeva, V. S., Kiselev, A. V., Nikitin, Yu. S., Petrova, R. S., and Shcherbakova, K. D.

TITLE: Graphitized carbon black as adsorbent in gas chromatography

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 8, 1961, 1889 - 1891

TEXT: In the work under consideration, the authors made use of geometrically and chemically modified silica gel as the carrier of another solid body. Thermal types of carbon black annealed at ~ 3000°C are high-disperse bodies with a very homogeneous surface. Their absolute adsorption values are much greater than those of other adsorbents. Tablets are difficult to produce without binding agents. Therefore, the carbon black is introduced into the large pores of the solid carrier. Thus, a powdery adsorbent with homogeneous surface may be introduced into the column. The carrier should be a large-porous body with thermally and chemically stable and very poorly adsorbing surface. In the present case, the authors used large-porous silica gel with a very small surface covered by chemically grafted trimethyl silyl groups. A 2-hr hydrothermal treatment in the

Card 1/6

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

autoclave at 350°C reduced the silica gel surface to 15 m^2/g; the enlargement of skeleton globules and pores was established by electron microscopy. Further grafts of trimethyl silyl groups on the silica gel surface according to I. V. Borisenko led to a sharp decrease of adsorption. ~18% blown out and sieved graphitized thermal carbon black T-1 (T-1) (3000°C) was then introduced into the pores. The silica gel was thereupon introduced into the column chromatograph, where it was heated for 2 hr in the nitrogen flow at 150°C. Graph a) in the figure shows chromatograms of vapor mixtures of benzene, acetone, and n-hexane on geometrically modified silica gel with hydrated surface; б) shows chromatograms of these three individual vapors on silica gel modified with trimethyl silyl groups; and в) chromatograms of the mixture on silica gel modified with carbon black at different temperatures. The succession of peaks was, however, the inverse compared with silica gel with hydrated surface. The acetone peak had a pronounced tail due to reaction between carbonyl groups and accessible hydroxyl groups of the silica gel carrier. The form of benzene- and n-hexane peaks corresponds to the form of curves illustrating the adsorption heats as functions of the form of adsorption isotherms. The peaks become narrower at higher temperatures. According to theory, the

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

ratio between band width and retardation time is conserved. A study of chromatograms of individual benzene and hexane vapors at five temperatures allowed estimating their adsorption heats on carbon black from the dependence of logarithm of retardation time versus inverse temperature; results were consistent with calorimetric data. The combination described is well suited for gas chromatography as well as for a rapid physico-chemical analysis of the utilized powders alike. Silica gels modified in this way can also serve as carriers of steady liquid phases. There are 1 figure and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The two references to English-language publications read as follows: Ref. 3: J. Bohemen, Stanley H. Langer, R. H. Perett, J. H. Purnell, J. Chem. Soc., 2444, 1960. Ref. 5: F. T. Eggertsen, H. S. Knight, S. Groennings, Analyt. Chem., 28, 303, 1956.

ASSOCIATION: Laboratoriya adsorptsii i gazovoy khromatografii khimicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Laboratory for Adsorption and Gas Chromatography of the Chemistry Division of Moscow State University imeni M. V. Lomonosov)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/076/62/036/003/005/011
B101/B108

5 1190

AUTHORS: Nikitin, Yu. S., and Kaliko, M. A. (Moscow)

TITLE: Influence of the chemical composition on the structure, stability, and catalytic properties of mixed alumino-silicate catalysts

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 3, 1962, 533 - 539

TEXT: By mixing moist C-25 (S-25) hydrogel of SiO_2 and A-2 (A-2) hydrogel of Al_2O_3 catalysts with varying contents of Al_2O_3 were prepared (methods see Zh. fiz. khimii, 33, 922, 1959). The samples were calcined at 750°C, treated with water vapor at that temperature for 6 hrs, and their catalytic action tested before and after the treatment with water vapor by cracking a gas oil fraction. The following data are given:

Card 1/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Structural characteristics of mixed aluminosilicate catalysts

sample	I	A				B			
		II	III	IV	V	II	III	IV	V
SiO_2	0	310	220	0.75	84	-	-	-	-
CK-8 (SK-8)	17	395	300	0.59	40	300	210	0.58	78
CK-20 (SK-20)	30	440	310	0.83	66	280	230	0.76	84
CK-5 (SK-5)	40	415	335	0.60	44	225	190	0.46	52
CK-4 (SK-4)	50	415	280	0.61	52	280	170	0.48	52
Al_2O_3	100	305	165	0.47	76	-	-	-	-

Legend: I- Al_2O_3 content in % by weight; A- calcined at 750°C; B- after treatment with steam at 750°C; II- specific surface s of the skeleton, in m^2/g; III- specific surface s' of the film, in m^2/g; IV- volume of voids, in cm^3/g; V- predominant diameter d of voids, in Å.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Influence of the ... S/076/62/036/003/005/011
B101/B108

The two references to English-language publications read as follows: P. B. Elkin, C. G. Shull, L. C. Roess, Ind. Eng. Chem., 37, 327, 1945; S. Brunauer, P. Emmett, E. Teller, J. Amer. Chem. Soc., 60, 309, 1938.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti (All-Union Scientific Research Institute of the Petroleum Industry)

SUBMITTED: June 2, 1960

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

AKSHINSKAYA, N.V.; KISELEV, A.V.; NIKITIN, Yu.S.; PETROVA, R.S.; CHUYKINA, V.K.; SHCHERBAKOVA, K.D.

Geometric and chemical modification of silica gel for the adsorption separation of hydrocarbons by gas chromatography. Zhur.fiz.khim. 36 no.5:1121-1123 My '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova. (Silica) (Hydrocarbons) (Gas chromatography)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

AKSHINSKAYA, N.V.; BEZNOGOVA, V.Ye.; KISELEV, A.V.; NIKITIN, Yu.S.

Geometric modification of the skeleton of xerogels. Part 1.
Zhur.fiz.khim. 36 no.10:2277-2280 O '62. (MIRA 17:4)

1. Laboratoriya adsorbtsii i gazovoy khromatografii khimicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

MARTIN, Yu.S.; KALIKO, M.A.

Effect of the chemical composition on the structure, [illegible] and catalytic properties of mixed aluminosilicate catalysts. Zhur. fiz. khim. 36 no.3:533-539 Mr '62. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut [illegible] promyshlennosti.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

KISELEV, A.V.; NIKITIN, Yu.S.

Effect of initial porosity on the nature of change in pore structure of alumin.silica gels and silica gels during their sintering. Kin. i kat. 4 no.4:648-651 Jl-Ag '63. (MIRA 16:11)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.S.

Kinetics of cumene cracking on a spherical aluminosilicate catalyst. Kin. i kat. 4 no.6:898-903 N-D '63. (MIRA 17:1)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

AKSHINSKAYA, N.V.; KISELEV, A.V.; NIKITIN, Yu.S.

Geometric modification of a skeleton of xerogels. Part 2.
Zhur. fiz. khim. 37 no.4:927-928 Ap '63. (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

AKSHINSKAYA, N.V.; KISELEV, A.V.; NIKITIN, Yu.S.

Geometric modification of the skeleton of xerogels. Part 3. Zhur. fiz. khim. 38 no.2:488-490 F '64. (MIRA 17:8)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

AKSHINSKAYA, N.V.; DAVYDOV, V.Ya.; ZHURAVLEV, L.T.; KERTOYT, Dzheffri [Curthoys, Geoffrey]; KISELEV, A.V.; KUZNETSOV, B.V.; NIKITIN, Yu.S.; RYBINA, V.V.

Effect of hydrothermal treatment in an autoclave on the structure and adsorptive properties of silica gel. Koll. zhur. 26 no.5: 529-537 S-O '64. (MIRA 17:10)

1. Moskovskiy universitet, khimicheskiy fakul'tet i Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

KISELEV, A.V.; NIKITIN, Yu.S.; PETROVA, R.S.; FAM NGOK TKHAN'

Study of magnesium oxide surface by adsorption and gas chromatography methods. Koll.zhur. 27 no.3:368-373 My-Je '65. (MIRA 18:12)

1. Moskovskiy universitet imeni Lomonosova, khimicheskiy fakul'tet. Submitted Oct. 29, 1963.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

KISELEV, A.V.; NIKITIN, Yu.S.; SAVINOVA, N.K.; SAVINOV, I.M.; YASHIN, Ya.I.

Use of macroporous silica gels for gas chromatographic analysis at high temperatures. Zhur. fiz. khim. 38 no.9:2328-2330 S '64. (MIRA 17:12)

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

[illegible] BEVA, Ye.r., [illegible], A.V.; [illegible], Yu.S.; [illegible]TEKOV, Y[illegible].

Effect of the size of [illegible] pores in polystyrene [illegible].
Zhur.fiz.khim. 39 no. [illegible] 1965.

MIRA 18:8)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 35408-66 EWT(m)

ACC NR: AP6026839 SOURCE CODE: UR/0069/66/028/001/0003/0010

36
B

AUTHOR: Akshinskaya, N. V.; Davydov, V. Ya.; Kiselev, A. V.; Nikitin, Yu. S.

ORG: Chemical Faculty, Moscow University im. M. V. Lomonosov (Khimicheskiy fakul'tet Moskovskiy gosudarstvennyy universitet)

TITLE: Spectroscopic and adsorption study of geometrically modified wide-pore silicagels containing ultrapores

SOURCE: Kolloidnyy zhurnal, v. 28, no. 1, 1966, 3-10

TOPIC TAGS: silica gel, IR spectroscopy, adsorption, porosity, gas chromatography

ABSTRACT: Industrial, laboratory, and experimental silica gels subjected to hydrothermal treatment in an autoclave, were investigated by IR spectroscopy for adsorption of D_2O vapor (to determine the number of exchangeable OH groups) and by measuring adsorption. It was established that all of these silicagels had in addition to wide pores ultrapores that were accessible to water molecules but inaccessible to molecules of benzene, methyl alcohol, or krypton. The ultrapores could be eliminated by treatment at high temperatures. The degree to which they were closed by sintering depended on the conditions of treatment. While some of the ultrapores still remained after sintering in air at 750° or in vacuo at 800°, they were eliminated practically completely after treatment of the silicagels in a stream of water vapor at 750° or higher temperatures.

Card 1/2 UDC: 541.183.25

D916 2592

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.V.

Echinococcosis and coral-shaped kidney stone. Urologiia 22 no.3: 52-53 My-Je '57. (MLRA 10:8)

1. Iz urologicheskogo otdeleniya (nach. - kandidat meditsinskikh nauk A.A.Koysman) Okruzhnogo voyennogo gospitalya (nach. - polkovnik meditsinskoy sluzhby N.D.Neustroyev)

(KIDNEY DISEASES, case reports
echinococcosis with stone, surg.)
(ECHINOCOCCOSIS, case reports
kidney, with kidney stone, surg.)
(KIDNEYS, calculi
with echinococcosis, rare case)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.V.; SAUKHATA, I.S.

Lithium pegmatites in northern Karelia. Trudy Lab. geol. dokem. no.7:109-119 '57. (MIRA 11:3)

(Karelia--Pegmatites)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Yu.V.

Molybdenite ore formation in the veins of northern Karelia. Trudy Lab.geol dokem. no.9:150-157 '59. (MIRA 13:11)
(Karelia--Molybdenite)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

SHURKIN, Kirill Aleksandrovich, kand.geol.-mineral.nauk; GORLOV, Nikolay Vasil'yevich; SAL'S, Marina Yevgen'yevna; DUK, Vladimir Leont'yevich; NIKITIN, Yuriy Vladimirovich; POLKANOV, A.A., akademik, glavnyy red.; ARON, G.M., red.izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Belomorsk complex of northern Karelia and the southwestern part of the Kola Peninsula; geology and pegmatite potential] Belomorskii kompleks Severnoi Karelii i iugo-zapada Kol'skogo poluostrova; geologiia i pegmatitonosnost'. Moskva, Izd-vo Akad. nauk SSSR, 1962. 305 p. (Akademiia nauk SSSR. Laboratoriia geologii dokembriia. Trudy, no.14). (MIRA 16:2)
(Karella—Pegmatities)
(Kola Peninsula—Pegmatites)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

LEONOVA, V.A.; NIKITIN, Yu.V.

Mineralogy of monazites in pegmatite veins of the Chupa region. Zap.Vses.min.cb-va 92 no.2:136-145 '62. (MIRA 15:6)

1. Leningradskiy gosudarstvennyy universitet, Laboratoriya geologii dokembriya AN SSSR.
(Chupa region—Monazite) (Chupa region—Pegmatites)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITIN, Ye.V.

Absolute age of m[illegible] magmatites in the Rezalatva deposit (Kola [illegible]). [illegible] Doklady. no.19:236-238 '62 (MIRA 1[illegible]:8)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

KISTER, E.G.; MARTIROSOV, N.Ya.; NIKITIN, Yu.Z.; GOSTEV, B.S.

Using chromates to increase the thermal stability of clay muds. Neft. khoz. 42 no.7:23-26 Jl '64. (MIRA 17:8)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

MARTIROSOV, N.Ya.; NIKITIN, Yu.Z.

Treatment of drilling fluid when drilling the Galyugaevskaya well No.1 to a depth of 5500 m. Burenie no.6:10-13 '64. (MIRA 18:5)

1. Trest "Groznefterazvedka".

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

GORYACHEV, Ye.Z., inzhener; IVANOV, Ye.G., inzhener; NIKITINA, A.A., inzhener; PESTRIKOV, V.V., inzhener; YEL'SKIY, I.M., inzhener; KONOSTELIN, V.P., inzhener; KEVZIN, Ya.A., inzhener.

Operation practices of the Kuybyshev automatic telegraph. Vest.sviazi 16 no.2:17-20 F '56. (MLRA 9:7)

1.Nachal'nik Kuybyshevskogo telegrafa (for Goryachev).
(Kuybyshev--Telegraph--Perforating system)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKETINA, A.A.

Eight-months abdominal pregnancy. Akush. i gin. 34 no.5:110 S-O '58 (MIRA 11:10)

1. Glavnyy akusher-ginekolog Khorezmskoy oblasti.
(PREGNANCY, EXTRAUTERINE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

IVUS, Ye.M.; YEVSTIGNEYEVA, T.V.; NIKITINA, A.A.

Carrying out a planned oral hygiene program for children in Minsk. Stomatologiia 40 no.1:88-90 Ja-F '61. (MIRA 14:5)

1. Iz stomatologicheskoy polikliniki No.2 Minska.
(MINSK--MOUTH--CARE AND HYGIENE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

PHASE I BOOK EXPLOITATION SOV/4164

Vsesoyuznoye soveshchaniye po splavam redkikh metallov. 1st, Moscow, 1957

Redkiye metally i splavy; trudy... (Rare Metals and Alloys; Transactions of the First All-Union Conference on Rare-Metal Alloys) Moscow, Metallurgizdat, 1960. 438 p. 3,150 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut metallurgii; USSR Komissiya po redkim metallam pri nauchno-tekhnicheskom komitete.

Ed.: I.K. Shepovalov; Ed. of Publishing House: G.N. Kamayeva; Tech. Ed.: P.G. Islant'yeva.

PURPOSE: This collection of articles is intended for metallurgical engineers, physicists, and workers in the machine-building and radio-engineering industries. It may also be used by students of schools of higher education.

COVERAGE: The collection contains technical papers which were presented and discussed at the First All-Union Conference on Rare-Metal Alloys, held in the Institute of Metallurgy, Academy of Sciences USSR in November 1957. Results of investigations of rare-metal alloys, titanium, and copper-base alloys with additions of rare metals are presented and discussed along with investigations of rhenium, vanadium, niobium, and their alloys. The effect of rare-earth metals on properties of magnesium alloys and steels is analyzed. The uses of rhenium as a dehydrating catalyst, electroplating material, and material suitable for making plugs for automobile electrical systems are discussed. Also, the effect of the addition of certain elements on the properties of heat-resistant steel is examined and alloys with special physical properties (particularly semiconductive alloys) are discussed. No personalities are mentioned. Soviet and non-Soviet references accompany some of the articles.

PART II. TITANIUM, AND COPPER-BASE ALLOYS WITH RARE-METAL ADDITIONS

Danilova, G.P., I.P. Druzhinina, and M.V. Mel'tsev. Investigations of Alloys of the Titanium-Niobium-Aluminum and Titanium-Molybdenum-Aluminum Systems 1

Mel'tsev, M.V., G.P. Danilova, and Ye. A. Kazetskaya. Effect of Rare Metals on the Oxidability of Titanium and of Some Titanium Alloys 42

Mel'tsev, M.V., and V.Z. Karlinskiy. Investigation of Titanium-Aluminum-Vanadium Ternary Alloy Systems 52

Danilova, G.P., G.S. Tikhonova, I.S. Moiseyeva, L.I. Seleznev, and L.V. Mel'nikova. High-Strength and Heat-Conducting Alloys of the Copper-Cobalt-Beryllium System 63

Rare Metals (Cont.) SOV/4164

PART III. RHENIUM, VANADIUM, NIOBIUM, ZIRCONIUM AND ALLOYS BASED ON THEM

Balandin, A.A., Ye.I. Karpenskaya, and A.A. Tolstoyeva. Rhenium as a Dehydrating Catalyst 72

Tylkina, M.A., and Ye.M. Savitskiy. Rhenium Alloys 80

Shlyarenko, S.I., E.M. Sominskaya, A.A. Nikitina, and I.I. Lavrov. Electroplating With Rhenium 111

Osov, V.V., and M.D. Povolotskaya. Electrical Contacts Made of Rhenium 123

Shumskaya, Ye.A. The Possibility of Using Alloys on Tungsten With Rhenium for Making Contacts for Automobile Electrical Equipment 133

Baron, V.V., and Ye.M. Savitskiy. Properties of Vanadium, Niobium, and of Alloys Based on Them 136

Card 4/8

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

35086
S/697/61/000/000/011/018
D228/D303

18.3100

AUTHORS: Sklyarenko, S. I., Sominskaya, Z. M. and Nikitina, A. A.

TITLE: Preparation of powdery rhenium by the electrolytic method

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 100-107

TEXT: In conducting this study the authors attempted to achieve three objectives: 1) The determination of the optimum temperature and concentration of ReO_4^-; 2) the determination of the optimum cathode current-density and concentration of SO_4^{2-}; and 3) the development of a semi-industrial technique for the electrolytic prepn. of Re. Before describing their experiments the authors briefly allude

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Preparation of powdery ...

S/697/61/000/000/011/013
D228/D303

NH_4ReO_4 are 100-200 amp/dm^2, 100 g/l, and 100 g/l; a cathode of Pt plate and an anode of Ta plate are recommended in both cases. Turning to the prepn. of Re on a semi-industrial scale, the authors describe the apparatus and the procedure employed in their tests and give the content of 17 impurities in the metal thus obtained. There are 5 figures, 2 tables and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: A. Hampel, Rare Metals Handbook, 347 (1954); D. E. Rosenbaum, R. L. Runck and I. E. Campbell, J. Electrochem. Soc. 103, no. 9, 518 (1956). /Abstracter's note: pp. 101-102 of the photostat copy are partly illegible./

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

35087
S/697/61/000/000/013/018
D228/D303

18.1200

AUTHORS: Sklyarenko, S. I., Sominskaya, Z. M., Nikitina, A. A. and Lavrov, I. I.

TITLE: Investigating the possibility of electrolytically preparing certain rhenium alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po problieme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 152-158

TEXT: In this study the authors' aims were (1) to prepare Re-Cr, Re-Cr and Re-Cr-Ni alloys; (2) to investigate the relationship between the alloy composition, the electrolyte composition and temperature, and the cathode current-density; and (3) to determine the optimum conditions for obtaining high-grade ppts. Their laboratory apparatus which is illustrated in a diagram, included a Se reti

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/6[illegible]/61/000/000/0[illegible]
D228/D30[illegible]

Investigating the possibility ...

fier, a universal thermostat, a voltage regulator and a vessel for keeping the electrolyte at a steady temperature. Graphs were [illegible] ted from the results of the first group of tests to show the dependence of the current yield on the cathode current-density and the concentration of $CuSo_4$ in the electrolyte. The data suggest that a low-Cu alloy may be best prepared by electrolyzing material containing 50, 75, and 1 g/l of $KReO_4$, H_2SO_4 and $CuSO_4$ respectively at an electrolyte temperature of 75°C and a current density of 20 - 40 amp/dm^2. For an alloy with up to 36% Cu the corresponding concentrations are 200, 45, and 125 g/l at 20°C and [illegible] amp/dm^2. The authors then consider how certain factors -- the component ratio, the H_2SO_4 concentration, the anode composition [illegible] -- influence the electropptn. of Re-Cr alloys. A deposit with [illegible]% Cr was obtained from the electrolysis of a solution containing $KReO_4$ 50, Cr_2O_3 [illegible] $(NH_4)2SO_4$ 40, and H_2SO_4 75 g/l at 70 - 75°C and 100 amp/dm^2. The employment of a cathode of Cu plate and an anode of Pt or Pb-Sb is

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

advised under such conditions. The effect of variations in the concentration of electrolyte components on the composition of Re-Cr-Ni alloys was then studied in a third series of experiments. It is concluded from these data that satisfactory results can be achieved at 70 - 75°C and 40 - 80 amp/dm^2 with a bath of the following composition: $KReO_4$ 10-50, Cr_2O_3 10-25, $NiSO_4$ 40, $(NH_4)_2SO_4$ 40, and H_2SO_4 75 g/l. A table demonstrates the concentration of KReO in the electrolyte and the Re:Cr:Ni ratio in the alloy. There are 4 figures, 1 table and 4 non-Soviet-bloc references. The 4 most recent references to the English-language publications read as follows: C. G. Fink et al., Trans. Electrochem. Soc., 66, 471, (1934), C.B. F. Young, Metal Ind., 34, 176, (1934); L. E. Netherton et al., J. Electrochem. Soc., 99, 44 (1952); and 98, 106 (1954). /Abstracter's note: Last two references incorrectly given?/

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

35091
S/697/61/000/000/017/018
D228/D303

18.1200

AUTHORS: Sominskaya, Z. H., Nikitina, A. A., Tylkina, M. A., Sklyarenko, S. I. and Savitskiy, Ye. M

TITLE: Galvanic coatings with rhenium-nickel, rhenium-cobalt, rhenium-chromium and rhenium-nickel-chromium alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniye. Moscow, Izd-vo AN SSSR, 1961, 209-213

TEXT: In this work the authors prepared stable galvanic coatings of various alloys -- Re-Ni, Re-Co, Re-Cr, Re-Ni-Cr -- and studied their properties. It is stated that, although scientists have obtained galvanic coatings of binary Re alloys, no previous attempt has been made to prepare films consisting of the ternary Re-Ni-Cr alloy. In the tests the coatings were applied to rods of Cu and

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

S/697/61/000/000/017/018
D228/D303

Galvanic coatings with ...

Ni-Cr. The method of L. E. Netherton and M. L. Holt was followed in the preparation of Ni-Re alloy coatings containing 19 - 86% Ni. The experimental procedure is described together with those for the preparation of Re-Co (13 - 82% Co) and Re-Cr (<1% Cr) coatings. In the case of the ternary alloy, containing 13.3% Ni and 5.4% Cr, the authors electrolyzed material composed of $KReO_4$ 50, CrO_3 20, $NiSO_4$ 100, H_2SO_4 75, and $(NH_4)_2SO_4$ 40 g/l at a temperature of 75°C and a cathode current-density of 100 amp/dm^2. The analytical method employed to determine the alloys' composition is also described. The hardness of the coating layers was measured on a PTM-3 (PTM-3) instrument with a diamond pyramid under loads of 100, 50 and 20 g. Their thickness was estimated with the help of microphotographic techniques. On the basis of their experimental data, which are given in tables, the authors draw the following conclusions: 1) There is no diffusion penetration of Re and its alloys into the surface layer of the base material; 2) the coatings are mostly quite dense, but the layers are not evenly distributed in

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Galvanic coatings with ... S/697/61/000/000/0[illegible]/0[illegible]8
D228/D303

the surface of the specimens; 3) cracks observed in some coatings were probably formed under the severe machining conditions and high temperatures used to prepare the polished sections; 4) the microhardness determinations only yield tentative information which shows that the coatings are harder than the Cu and Ni-Cr base. There are 2 figures, 2 tables and 7 references: 2 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: C. Joynd, Metal Ind., 34, 175, (1936); L. E. Netherton and W. L. Holt, J. Electrochem. Soc., 98, 106, (1951) and 99, 44, (1952); M. F. Qualey, US Pat. 2739[illegible]08, (1956).

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.A.

The Second All-Union Conference on Rhenium, sponsored by the Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR, and the State Institute of Rare Metals, was held in Moscow 19-21 November 1962. A total of 335 representatives from 83 scientific institutions and industrial establishments participated. Among the reports presented were the following: autoclave extraction of Re from Cu concentrates (A. P. Zelikman and A. A. Peredereyev); Re extraction from the gaseous phase (V. P. Savrayev and N. L. Peysakhov); recovery of Re by sorption and ion interchange (V. I. Bibikova, V. V. Il'ichenko, K. B. Lebedev, G. Sh. Tyurekhodzhayeva, V. V. Yermilov, Ye. S. Raimbekov, and M. I. Filimonov); production of carbonyl Re (A. A. Ginzburg); electrolytic production of high-purity Re and electroplating with Re (Z. M. Sominskaya and A. A. Nikitina); Re coatings on refractory metals produced by thermal dissociation of Re chlorides (A. N. Zelikman and N. V. Baryshnikov); plastic deformation and thermomechanical treatment of Re (V. I. Karavaytsev and Yu. A. Sokolov); growth of Re single crystals and effect of O_2 on their properties (Ye. M. Savitskiy and G. Ye. Chuprikov); Re-Mo, Re-W, and Re-precious-metal alloys (Ye. M. Savitskiy, M. A. Tylkina, and K. B. Povarova); synthesis of Re nitrides, silicides, phosphides, and selenides (G. V. Samsonov, V. A. Obolonchik, and V. S. Neshpor); weldability of Re-Mo and Re-W alloys (V. V. D'yachenko, B. P. Morozov, and G. N. Klebanov); new fields of application for Re and Re alloys (M. A. Tylkina and Ye. M. Savitskiy); and Re-Mo alloy for thermocouples (S. K. Danishevskiy, Yu. A. Kocherzhinskiy, and G. B. Lapp). [WW]

Tsvetnyye metally, no. 4, Apr 1963, pp 92-93

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 23885-65 EWP(e)/EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(k)/EWP(b) Pf-4/Ps-4/
Pu-4 IJP(c) JD/JG/MLK

ACCESSION NR: AT5002761 S/0000/64/000/000/0090/0095

AUTHOR: Sominskaya, Z.M.; Nikitina, A.A.

B+1

TITLE: Electrodeposition of high-purity rhenium 27

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 90-95

TOPIC TAGS: rhenium, rhenium refining, electrolytic refining, electrodeposition, ammonium perrhenate, anion exchange resin, rhenium extraction, rhenium adsorption, tributyl phosphate, rhenium powder

ABSTRACT: The authors studied the possibility of depositing rhenium from solutions of ammonium perrhenate which were obtained by three methods: (1) adsorption of rhenium from potassium perrhenate by the EDE-10P anion exchange resin followed by washing with ammonia; (2) extraction of rhenium from potassium perrhenate with tributyl phosphate followed by reextraction with ammonia; (3) dissolution of solid rhenium obtained from potassium perrhenate followed by neutralization with ammonia. It was found that the electrochemical method produces powdered rhenium of high purity. The influence of the duration and ratio of cathodic to anodic current on the particle size of the powder was investigated. Comparative characteristics of powdered rhenium obtained by

Card 1/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 23885-65

ACCESSION NR: AT5002761

0

different methods (direct current, alternating current; powder obtained from hydrogen reduction) are tabulated, and the electrolytic circuit of a device with a current of reversible polarity is given. The powders could not be pressed satisfactorily, apparently because a uniform distribution in the metal die could not be achieved. Orig. art. has: 2 figures, 4 tables and 4 formulas.

ASSOCIATION: none

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 003 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 23349-65 EWT(m)/EWP(b)/EWP(t) IJP(c) JD/JG/MLK

ACCESSION NR: AT5002762 S/0000/64/000/000/0096/0101

AUTHOR: Sominskaya, Z. M.; Nikitina, A. A.

B+1

TITLE: Rhenium and Rhenium-alloy coatings 18

27

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya, 2d, Moscow, 1962. Reniy (Rhenium); trudy soveschaniya. Moscow, Izd-vo Nauka, 1964, 96-101

TOPIC TAGS: nickel containing alloy, tungsten containing alloy, rhenium, rhenium alloy, cobalt containing alloy, rhenium plating, rhenium alloy plating, titanium, molybdenum, nickel, steel, gallium corrosive action

ABSTRACT: The corrosion behavior of rhenium plated on Mo, Ni, and steel has been investigated. Tested metal specimens were electroplated with rhenium in several steps (each plating operation followed by annealing at 700—800C to obtain coatings heavier than 5μ. The coatings were relatively dense and contained no continuous porosity. Resistance of Re to corrosion in Ga was tested at temperatures from 300 to 1100C. Test results showed that though solid Re resisted cor-

Card 1/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 23349-65

ACCESSION NR: AT5002762

zosion even at 100C, Re coatings (about 10μ thick) protected steel and nickel only up to 300C and Mo to about 800C. Rhenium-refractory alloy coatings appear to be the most promising. Such an alloy coating containing 17% Re, 18% W, and 65% Co, has been deposited in an electrolyte containing 12g/ℓ W, 10g/ℓ Re, and 4g/ℓ Co. Orig. art. has: 2 figures and 2 tables. [MS]

ASSOCIATION: none

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 006 OTHER: 004 ATD PRESS: 3174

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 9877-66 EWP(e)/EWT(m)/ETC/EWG(m)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)
ACC NR: AP5026784 JD/IM/JG/AT/WH SOURCE CODE: UR/0286/65/000/017/0070/0070

INVENTOR: Sominskaya, Z. M.; Nikitina, A. A.; Mikhal'tsova, V. D.

ORG: none

TITLE: Production of heat-resistant rhenium-tungsten alloy. Class 40, No. 174368 [Announced by the state Scientific Research and Planning Institute of the Rare Metals Industry (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 70

TOPIC TAGS: rhenium alloy, tungsten containing alloy, heat resistant alloy

ABSTRACT: This Author Certificate introduces a method for the production of heat-resistant rhenium-tungsten alloy. To obtain alloy in the form of a coating, the process is carried out by electrolysis at 50—70C and 100-150 a/dm^2 for 5—15 min. in an electrolyte of the following composition (g/l.): ammonium or potassium perrhenate 50—100, sodium tungstate 2—16, ammonium sulfate 100—200, and citric acid 100—150. To obtain alloy in the form a powder with a uniform distribution of tungsten, the process is continued for 15 min or more. [AZ]

SUB CODE: 11/ SUBM DATE: 13Feb64/ ATD PRESS: 4165

Card 1/1 UDC 621.357.9

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 13699-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) JD/HW/JG

ACC NR: AP6002584 SOURCE CODE: UR/0286/65/000/023/0076/0076

INVENTOR: Sominskaya, Z. M.; Nikitina, A. A.; Mikhal'tsova, V. D.

ORG: none

40
B

TITLE: Method of electrolytic deposition of heat-resistant alloy. Class 48, No. 176769

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 76

TOPIC TAGS: electrolytic deposition, tungsten containing alloy, cobalt containing alloy, rhenium base alloy

ABSTRACT: This Author Certificate introduces a method of electrolytic deposition of heat-resistant alloy containing tungsten and cobalt. To obtain ternary Re-W-Co alloy in the form of a powder or a coating, the electrolysis is performed with a current density of 100 a/dm^2 at 50C in an electrolyte containing 10 g/l ammonium- or, potassium-perrhenate, 12 g/l tungsten in the form of a tungstate, 1—6 g/l cobalt in the form of a sulfate, and 250 g/l ammonium sulfate with ammonia to obtain an alcalinity of pH 10. [ND]

SUB CODE: 11, 07 SUBM DATE: 13Feb64/ ATD PRESS: 4185

Card 1/1 DR UDC: 621.357.7:669.84'5'27'25

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 63782-65 EWT(m)/EWP(i)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5017741 UR/0365/65/001/004/0367/0369

621.357.9

29
26
B

AUTHOR: Nikitina, A. A.; Sominskaya, Z. M.; Vagramyan, A. T.

TITLE: Combined electrolytic deposition of rhenium and copper

SOURCE: Zashchita metallov, v. 1, no. 4, 1965, 367-369

TOPIC TAGS: combined electrochemical deposition, deposition potential, electrochemical codeposition, electrochemically deposited rhenium, electrochemically deposited copper, ion reduction potential, polarization curve, cathode surface, passivation

ABSTRACT: In the presence of combined deposition of metals the deposition potential of the alloy often is lower than the deposition potentials of the components. This is usually attributed to the depolarizing effect exerted by the change in the partial molar free energy on the formation of alloys. This explanation, however, does not sound convincing in certain cases. Thus, it is known that lead and silver do not form alloys, yet the electrochemical deposition of salts of these metals from aqueous solutions results in a cathode Ag residue containing

Card 1/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 63782-65

ACCESSION NR: AP5017741

about 7% Pb. Therefore, even mutually insoluble metals may be co-deposited electrochemically. A similar effect was observed by the authors during the electrochemical deposition of rhenium and copper from aqueous solutions. Metallic unoxidized residues containing up to 30% Cu and Re could be isolated from ammonium sulfate solutions with perrhenate and copper sulfate being present in concentrations of at least 50 g/liter and at most 2.5 g/liter, respectively. This prompted the authors to investigate the combined effect of Re and Cu on the reduction potential of their ions. In this case, as in the co-deposition of Ag and Pb, alloy-formation does not take place, since a Re-Cu alloy could be obtained neither by the thermal method nor by the electrolysis of fused potassium perrhenate on molten silver cathode. The experimental curves plotted (in all cases hydrogen was isolated as well) indicate that the deposition of rhenium and release of hydrogen as well as, a fortiori, the deposition of copper and release of hydrogen occurs in the presence of a higher overvoltage than the combined deposition of rhenium and copper and release of hydrogen. The addition of Cu to the Re-containing solution facilitates the reduction of the perrhenate ions and thus reduces the polarization during the deposition of both Re and Cu. Thus, the co-deposition of these metals is mutually facilitated although they form neither solid solutions nor chemical compounds. The decrease in polarization due to the

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 63782-65

ACCESSION NR: AP5017741

3

facilitated reduction of metal ions should be differentiated from depolarization, due to the change in free energy during alloy-formation; it is probably rather due to the change in the state of the cathode surface. It may be assumed that, when each metal is separately deposited from the solutions, the electrode surface, reacting with the medium, gets passivated and thus the reduction of the metal ions is complicated, whereas the combined deposition (co-deposition) of both metals slows down this passivation and thus accelerates the rate of reduction of their ions compared with the rate of reduction of hydrogen ions. This was verified by appropriate experiments also performed by the authors. Thus, the advantages of the co-deposition of both metals as compared with their separate deposition stem from a change in the state of the cathode surface. Orig. art. has: 1 figure, 2 tables.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut redkometallicheskoy promyshlennosti (State Scientific Research Institute of Rare Metals Industry) 44,55

SUBMITTED: 06Mar65 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 004 OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.A.; SOLOV'YEVA, Z.A.; SOMINSKAYA, Z.M.; VAGRAMYAN, A.T.

Mechanism of rhenium electrodeposition. Elektrokhimiia 1 no.6: 748-751 Je '65. (MIRA 18:7)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

FAVORSKAYA, I.A.; NIKITINA, A.A.

Oxidation of secondary acetylenic alcohols. Zhur. org. khim. 1 no. 12:2094-2097 D '65 (MIRA 19:1)

1. Leningradskiy gosudarstvennyy universitet. Submitted October 10, 1964.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.A.

Teratology of the flower of "Tajik seedless" mulberry (Morus alba L.). Bot. zhur. 50 no.8:1132-1133 Ag '65. (MIRA 18:10)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I. Lenina.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

POPT, B.S., Inzh.; [illegible], [illegible], Inzh.

Increasing the technical levels of equipment for the assembly and repair of tires. [illegible] i neft. [illegible] [illegible]

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

VOSTROKNUTOV, Ye.G.; FORT, B.S.; ZHURAVLEV, V.F.; NIKITINA, A.A.

Provide the rubber tire repair industry with the new type of equipment. Kauch. i rez. 24 no.8:33-35 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i nauchno-issledovatel'skiy i konstruktorskiy institut po oborudovaniyu dlya shinnoy promyshlennosti.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

ACC NR: AP6015291 (A) SOURCE CODE: UR/0365/66/002/003/0349/0352

AUTHOR: Nikitina, A. A.; Sominskaya, Z. M.; Vagramyan, A. T.

ORG: none

TITLE: Mechanism of electrodeposition of rhenium

SOURCE: Zashchita metallov, v. 2, no. 3, 1966, 349-352

TOPIC TAGS: rhenium, electrodeposition, passivation

ABSTRACT: The study was devoted to a verification of a proposed mechanism of rhenium electrodeposition, and to the determination of the passivation rate of the electrode surface. Electrolytes of the following compositions (in g/l) were employed: (1) ammonium perrhenate 50, sulfuric acid 25; (2) ammonium perrhenate 50, sulfuric acid 25, ammonium sulfate 40. The electrolysis was conducted at a current density of 1 A/cm^2 and 70°C for 15 min. In the electrodeposition of rhenium from solution (1) with an intermittent current, the minimum on the curve representing the current efficiency of the metal vs. the pause between the current pulses was found to correspond to a pause of 10^{-2} sec. As the pause decreases, the current efficiency of the metal increases, indicating that the renewed surface of the cathode does not manage to become fully passivated. The curve shows that a pause of the order of 10^{-3} sec is required for the electrode surface to regain its original state. Thus, the experimental results bear out the "activation" mechanism of rhenium electrodeposition and

Card 1/2 UDC: 621.357.7

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

L 39959-66

ACC NR: AP6015291

0

show that the current efficiency of the metal depends of the state of the electrode surface, which in turn depends on the admixtures (such as ammonium sulfate, which is an activator of the electrode surface) present in the electrolyte. The experiment shows that in many cases, electrolysis with a pulsating current makes it possible to determine the passivation rate of an electrode surface. Orig. art. has: 3 figures.

SUB CODE: 11,07/ SUBM DATE: 21Oct65/ ORIG REF: 003

Card

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

Nikitina, A.F.

LANTES, V.A.; NIKITINA, A.F.

Survey of rational methods of the treatment of eczema and neurodermatitis with novocain. Vest. vener., Moskva no. 4:10-14 July-Aug. 1952. (CLML 23:3)

1. Candidate Medical Sciences, Honored Physician RSFSR for Laptev; Scientific Associate for Nikitina. 2. Of the Department of Dermatology (Head -- Prof. L. N. Mashkilleyson), Central Skin-Venereological Institute (Director -- Candidate Medical Sciences N. M. Turanov), Ministry of Public Health USSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A. F.

USSR/Medicine - Embikhin Jul/Aug 53

"Results of Treatment With Embikhin of Patients Afflicted With Mycosis Fungoides," A. F. Nikitina and A. A. Anton'yeva, Dermatological Clinic, Central Dermato-Venereological Inst, Min Health, USSR

Vest Vener i Derm, No 4, pp 54-56

Results of attempts to treat patients who were afflicted with mycosis fungoides by intravenous injection of 10-20cc of a physiological soln of embikhin twice a week for a period of 5-10 weeks, indicated the effectiveness of this drug. An

271T32

initial dose of 2-3 mg of embikhin is recommended. If that dose is well tolerated, it should be increased by 1 mg up to the max dose of 5-6 mg. After 10-20 injections, itching disappeared in three patients; nodes completely resolved in two patients. Due to the fact that some nodes still remained in 2 cases, after a course of treatment with embikhin, roentgenotherapy was subsequently resorted to with good results.

271T32

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.I.; GITEL'MAN, V.M.

Docent Lazar' Moiseevich Rozenfel'd; on the 60th year of his medical, teaching, and public activities. Vest.oto-rin. 18 no.3:87 My-Je '56. (MLRA 9:8)

(ROZENFEL'D, LAZAR' MOISEEVICH)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.F.; BOL'SHAKOVA, G.M.

Clinical aspects and treatment of erythema circinatum. Vest.ven. i derm. 30 no.4:56 Jl-Ag '56. (MLRA 9:10)

1. Iz otdela dermatologii TSentral'nogo kozhno-venerologicheskogo instituta

(ERYTHEMA) (PENICILLIN)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

[illegible], V.A.; NIKITINA, A.F.

Treating lupus erythematosus with vitamin B12 [illegible] 126 Je '57.

1. Iz otdela dermatologii (zav. - prof. N.S Sme[illegible]) [illegible] kozhno-venerologicheskogo instituta (dir. - dotsent [illegible]) Ministerstva zdravookhraneniya RSFSR
(LUPUS ERYTHEMATOSUS, DISSEMINATED, [illegible] vitamin B12)
(VITAMIN B12, [illegible] lupus erythematosus)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A. I.

Lab. Eroded Soil, Soil Inst., Acad. Sci. (-1946-)

"Effect of fertilizers upon wheat and rye on eroded soils of the forest-steppe"

Pochvovedeniye, No. 4, 1946.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

CA NIKITINA, A. I.

-5

Brown soils of mountainous Tadzhikistan. A. I. Nikitina. *Trudy Tashkentskogo Inst. im. V. I. Dokuchaeva* 28, 190-21 (1948). A description is given of the soils and their characteristics. Chem. and mech. analyses are included. [illegible] references. M. Hosea

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A. I.

Soil Conservation

Influence of soils on drainage conditions. Vop. Geog., No, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

MOGILEVSKAYA, R.A.; NIKITINA, A.I.

Separate determination of silicon, iron and aluminum in raw resinous mixtures and vulcanizates from silicon rubber. Kauch. i rez. 20 no.9:39-40 S '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.
(Rubber--Testing)
(Vulcanization)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.I., kand.sel'skokhoz.nauk

Dangerous soybean diseases in the Far East (to be continued). Zashch. rast. ot vred. i bol. 7 no.7:37-40 Jl '62. (MIRA 15:11)

1. Blagoveshchenskiy sel'skokhozyaystvennyy institut.
(Soviet Far East—Soybean—Diseases and pests)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A.I., kand.sel'skokhoz.nauk

Dangerous soybean diseases in the Far East (conclusion). Zashch. rast. ot vred. i bol. 7 no.8:38-40 Ag '62. (MIRA 15:12)

1. Balgoveshchenskiy sel'skokhoz.institut.
(Soviet Far East—Soybean—Diseases and pests)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9

NIKITINA, A. I., kand. sel'skokhozyaystvennykh nauk

Treating soybean seeds with microelements before sowing. Zemledelie 24 no.12:61-65 D '62. (MIRA 16:1)

1. Blagoveshchenskiy sel'skokhozyaystvennyy institut.

(Amur Province—Soybean—Disease and pest resistance)
(Plants, Effect of trace elements on)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137020008-9"