5(2)

AUTHORS: Moskvin, A. I., Zakharova, F. A. SOV/78-4-9-36/44

TITLE: The Investigation of the Complex Formation of Uranyl in Oxalate Solutions by Means of the Solubility Method

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 2151-2160 (USSR)

ABSTRACT: A. A. Grinberg, B. V. Ptitsyn and Ye. N. Tekster (Ref 2) determined the instability constant of the following reactions:

$$UO_2(C_2O_4)_2^{2-} \rightleftarrows C_2O_4^{2-} + UO_2C_2O_4 \quad \text{and}$$

$$\left[(UO_2)_2(C_2O_4)_5\right]^{6-} \rightleftarrows C_2O_4^{2-} + 2\left[UO_2(C_2O_4)_2\right]^{2-} .$$

In the present paper the solubility product (SP) of the compound $UO_2C_2O_4 \cdot 3H_2O$ and the complex formation of uranyl with oxalate ions were investigated. The solubility of uranyloxalate in $HClO_4$ and HNO_3 solutions of different concentrations as well as with additions of oxalic acid or ammonium oxalate was determined by

Card 1/4

the usual solubility method. As the data contained in table 1 show, the solubility decreases as the oxalate ion concentration increases, so that no complexes form in the range of concentration investigated. Table 2 lists the values of the equilibrium constants, table 3 those of the SP. As the graphic representation of the relationship between the logarithm of the concentration of the oxalate ion and the logarithm of the mineral acid concentration shows, the SP equals $2.2.10^{-9}$ in the presence of chloric acid, and $3.0.10^{-9}$ in the presence of nitric acid. The determination of the solubility of uranyl oxalate in oxalic acid and ammonium oxalate solutions, respectively, with additions of chloric acid or nitric acid (Tables 4, 5) point to complex formations according to the general equation

$$(2-2x)H^+ + UO_2C_2O_4 \cdot 3H_2O \rightleftarrows \left[UO_2(C_2O_4)_x^{2-2x}\right] + (1-x)H_2C_2O_4 + 3H_2O \ .$$

The graphical evaluation of the data (Figs 2, 3) showed that predominantly a complex with a component ratio of uranyl ion: oxalate ion = 1 : 2 forms. This complex formation, however, takes place in the case of hydrogen ion concentrations below 2 mol/l only.

The equilibrium constants of the complex formation are listed in table 6. The investigation of the solubility of uranyl oxalate trihydrate in ammonium oxalate solutions without any additions of mineral acid (Table 7) showed that here complexes of the same composition are formed. The following equation was established for the dependence of the solubility of uranyloxalate on the concentration of H^+ ions: $[H^+]^2 = 7.35\ H_2C_2O_4$. By means of this equation the most favorable condition for the precipitation of uranyloxalate from solutions in the presence of mineral acids can be determined. The respective instability constants of the oxalate complexes $[UO_2C_2O_4]$ and $[UO_2(C_2O_4)_2]^{2-}$ are given as $(1.7\pm0.3).10^{-7}$ and $(1.0\pm0.3).10^{-12}$ for the oxalate ion concentration range under investigation. The acidolysis constants are $2.5.10^{-2}$ and $2.1.10^{-2}$, respectively.

A comparison of the results with the data obtained in the case of plutonium oxalate complexes shows that there are but slight differences. The uranyl ion complexes are even more stable than those of the plutonyl ion. The authors thank Professor A. D. Gel'man for his valuable advice. There are 3 figures, 8 tables, and 10 references, 5 of which are Soviet.

SUBMITTED: June 4, 1958

AUTHORS: Gribov, L. A., Gel'man, A. D., Zakharova, F. A., Orlova, M. M.

S/078/60/005/04/039/040
B004/B016

TITLE: Investigation of Some Complex Compounds of Platinum by the Method of Infrared Spectroscopy

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 987 - 989 (USSR)

ABSTRACT: The authors investigated the infrared spectra of the compounds cis- and trans-$[CONH_3Cl_2Pt]$ in crystal form in paraffin oil emulsion in the range 2500 - 1600 cm^{-1} and 700 - 450 cm^{-1} by means of the IKS-11-spectrometer. The absorption bands are given which correspond to the group OCPt. To explain the resultant spectra, the oscillations of the plane model of the trans-$[CONH_3Cl_2Pt]$ are mathematically analyzed by assuming a linear addition of the CO molecules to platinum. Calculations confirm the linear addition of CO to Pt in contradiction with opinions held by M. Ye. Dyatkina (Ref 12). Furthermore, the infrared spectra of the compounds $[(CH_3)_3(NH_3)_3Pt]J$ and $[(CH_3)_3PtJ]$ were taken by means of the IKS-14-spectrophotometer. The results are summarized in a table along with preliminary interpretations of

Card 1/2

Investigation of Some Complex Compounds of Platinum by the Method of Infrared Spectroscopy

S/078/60/005/04/039/040
B004/B016

the spectra. There are 1 table and 12 references, 9 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

SUBMITTED: July 3, 1959

Card 2/2

S/078/60/005/06/06/030
B004/B014

AUTHORS: Zakharova, F. A., Moskvin, A. I.

TITLE: The Solubility Product of Uranium(IV) Oxalate. Composition and Dissociation Constants of Complex U(IV) Ions in Aqueous Solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 6, pp. 1228 - 1233

TEXT: The authors examined the formation of complex compounds of tetravalent uranium in oxalate solutions by using the solubility method. The solubility product of $U(C_2O_4)_2 \cdot 6H_2O$, its composition, and the instability constants of the oxalate complex compounds were determined in analogy to investigations on tetravalent plutonium described in Ref. 2. The dependence of the solubility product of $U(C_2O_4)_2 \cdot 6H_2O$ on the acidity of the hydrochloric acid solution was determined by means of tracing with the radioactive isotope U^{233}. The α-activity was measured by means of a

Card 1/3

radiometric apparatus of the type [illegible]-10000 (PS-10000). Table 1 lists experimental data. The solubility product was equal to $(4.3\pm0.4)\cdot10^{-22}$. The complex ions $[U(C_2O_4)]^{2+}$, $[U(C_2O_4)_2]^{0}$, $[U(C_2O_4)_3]^{2-}$, and $[U(C_2O_4)_4]^{4-}$ with the instability constants $2.5\cdot10^{-9}$, $1.4\cdot10^{-17}$, $1.7\cdot10^{-23}$, and $5.7\cdot10^{-28}$ were detected by examining the complex compounds formation of U(IV) in oxalate solutions in the presence of 0.5 N HCl (Table 3). The dependence of the reciprocal logarithm of the instability constants on the ratio between metal and addend is shown in a figure. The instability constants of the oxalate complex ions of the tetravalent actinides Th, U, Np, and Pu are compiled in Table 4. The authors refer to papers by A. A. Grinberg and G. I. Petrzhak, and thank Professor A. D. Gel'man for his valuable advice. There are 1 figure, 4 tables, and 10 references: 6 Soviet, 1 American, 1 British, and 2 Indian.

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The Solubility Product of Uranium(IV) Oxalate. Composition and Dissociation Constants of Complex U(IV) Ions in Aqueous Solutions

S/078/60/005/06/06/030
B004/B014

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

SUBMITTED: March 10, 1959

Card 3/3

GEL'MAN, A.D.; ESSEN, L.N.; ZAKHAROVA, F.A.; ALEKSEYEVA, D.P.; ORLOVA, M.M.

Production of oxalate-sulfite and sulfite complex compounds of thorium and uranium (IV). Dokl. AN SSSR 149 no.5:1071-1073 Ap '63. (MIRA 16:5)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom V.I.Spitsynym.

(Thorium compounds) (Uranium compounds)

L 16986-63 EWT(m)/BDS AFFTC/ESD-3 RM

S/020/63/149/005/010/018

61
60

AUTHOR: Gel'man, A. D., Essen, L. N., Zakharova, F. A., Alekseyeva, D. P., and Orlova, M. M.

TITLE: The production of oxalate-sulfite and sulfite complex compounds of thorium and uranium (IV)

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 5, 1963, 1071-1073

TEXT: The object of this investigation was to isolate and investigate previously unknown complex compounds of thorium and uranium (IV) with oxalate and sulfite ions. The starting materials were thorium oxalate and sodium sulfite. Thorium oxalate at room temperature dissolved satisfactorily in concentrated solutions of sodium sulfite, thus attesting to the formation of complex compounds. Upon pouring the resulting solution into alcohol, the complex segregates out in the form of a spiro-shaped mass which is transformed into a white crystalline substance when re-treated with alcohol. Analysis established that the complexes isolated are mixed oxalate-sulfite complexes and their composition can be expressed by the general formula $Na_{2n}[Th(C_2O_4)_2(SO_3)_n] \cdot x H_2O$. All the complexes isolated are fine crystalline powders which appear homogeneous when viewed under a microscope. But the refraction indexes of the crystals could not be determined owing to their extremely small size. The investigation is being continued. ASSOCIATION: Institute of Physical Chemistry, Academy of Sciences USSR.

Card 1/2

ZAKHAROVA, F. V.

ZAKHAROVA, F. V. (Post-Graduate Student, Department of Physiology, All-Union Institute of experimental Veterinary Medicine). New method of computing formal blood elements.

So: Veterinariya; 23; 2-3; February/March 1946; Uncl.
TABCON

ZAKHAROVA, F. V., Cand. of Biological Sci.
All-Union Inst. of Exptl. Vet. Med.
"Changes in cardiovascular system in infectious anemia of horses."

SO: Veterinariya 26(11), 1949, p. 27.

ZAKHAROVA, P.V., kandidat biologicheskikh nauk; KUKOLEVA, A.I. [deceased]

New data on the importance of colostrum in raising calves. Trudy VNIIK 3:243-245 '56. (MLRA 10:4)
(Calves--Feeding and feeding stuffs) (Colostrum)

ZAKHAROVA, F. V.

USSR/Human and Animal Physiology (Normal and Pathological). T-3
Blood: Formed Elements.

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74626

Author : Zakharova, F.V.

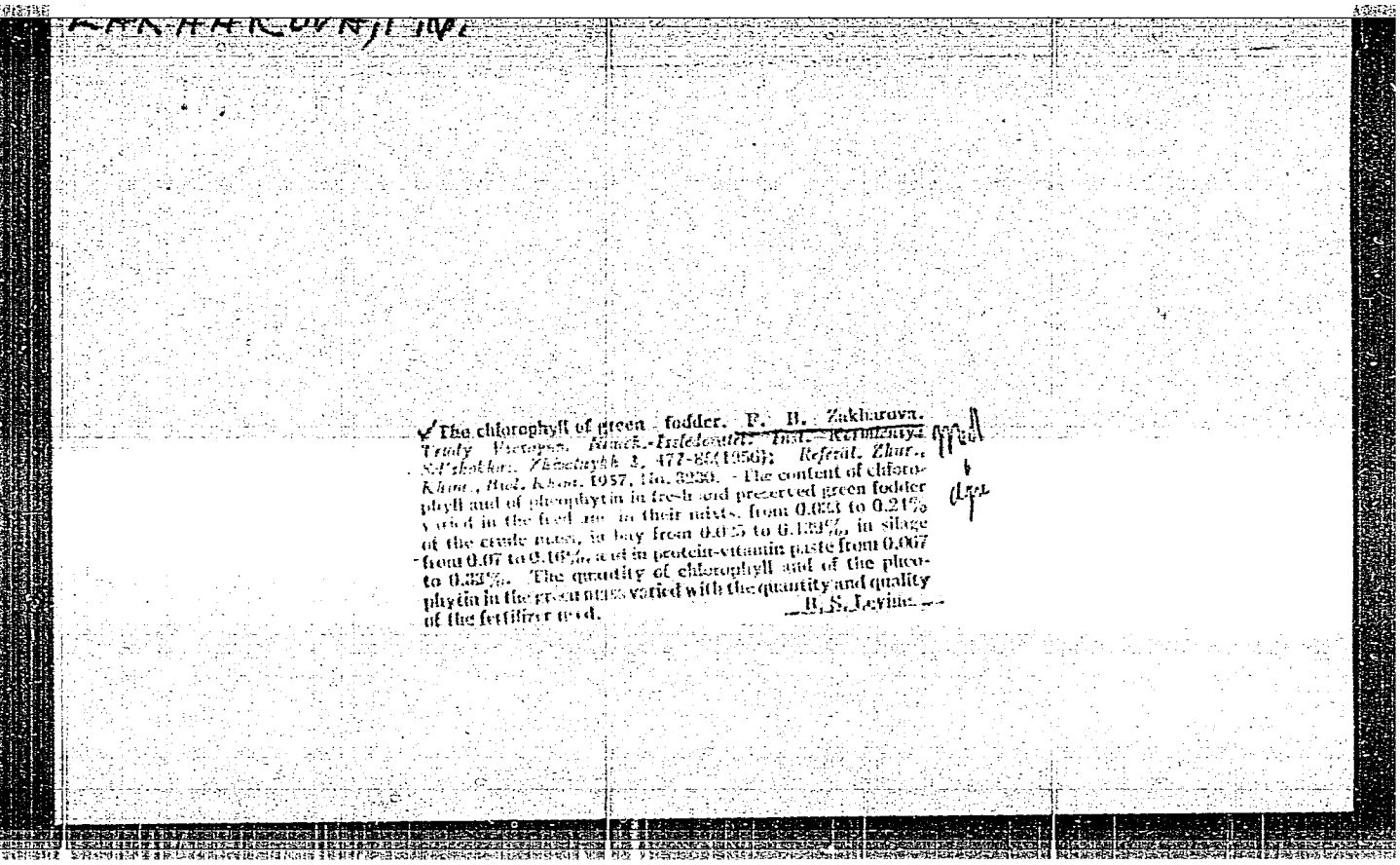
Inst : All-Union Scientific-Research Institute of Animal Nutrition .

Title : Features of the Hemopoeitic Function of Growing Cattle of the "Kholmogor" Species Depending on Age, Pregnancy, Productivity and Season of the Year.

Orig Pub : Tr. Vses. n.-i. in-ta kormleniya s.-kh. zhivotnykh, 1956, 3, 465-476.

Abstract : 79-92% Hb and 8.78-10.95 million erythrocytes per 1 mm^3 are found at birth in "Kholmogor" calves. For the 2-3 rd and up to the 30th day of life, these indicators decrease in connection with insufficient function of the hemopoietic organs. The quantity of leukocytes (L) after the first

Card 1/2



The chlorophyll of green fodder. F. B. Zakharova. *Trudy Voronezh. Gosudarst.-Issledovatel. Inst. Kormlenlya Sel'skokhoz. Zhivotnykh* 2, 477-85(1956); *Referat. Zhur., Khim., Biol. Khim.* 1957, No. 9250. - The content of chlorophyll and of pheophytin in fresh and preserved green fodder varied in the feed ass in their mixts. from 0.033 to 0.21% of the crude mass, in hay from 0.025 to 0.139%, in silage from 0.07 to 0.16%, and in protein-vitamin paste from 0.007 to 0.33%. The quantity of chlorophyll and of the pheophytin in the green mass varied with the quantity and quality of the fertilizer used.

B. S. Levine

Zakharova, F. V.

U.S.S.R. / Human and Animal Physiology. Blood. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22058.

Author : Zakharova, F. V.
Inst : Not given.
Title : Feed Chlorophyll - aA Hematopoiesis Stimulating Factor in Cattle.

Orig Pub: Tr. Vses. h-i. in-ta Korinleniya C. KL., Zhivotnykh, 1956, 3, 486-523.

Abstract: The structure and chemical compositions of rations (R) used in 5 experiments with Kholingorsk cows were studied comparatively. It was found that hay, silo stored in grass, or tops of rootcrops with high chlorophyll content increased the Hemoglobin and erythrocyte content of the blood and improved the work of the heart muscle. Hemoglobin dropped by 3.5% following

Card 1/2

Zakharova, F. V.

U.S.S.R. / Human and Animal Physiology. Blood. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22074.

Author : Zakharova, F. V., Shirokova, E. J.
Inst : Not given.
Title : A Study of Chlorophyll Metabolism in Cattle With the Aid of Radioactive Atoms.

Orig Pub: Zhivothovodstro, 1957, No 3, 37-44.

Abstract: Two 37-39 day old Kholmogorski calves were fed for a period of 6-10 days, crystalline chlorophyll (I) containing C^{14} (0.173-0.183 microcuries/kg.). Radioactive substances were studied in the blood, hemin, Hb and excreta. After the animals were killed, the radioactivity of the tissues was studied. It was demonstrated that the blood contained 59.43-79.05% of end prod-

Card 1/2

ZAKHAROVA, Feodosiya Vasil'yevna, kand.biolog.nauk; MAYOROVA, Ye.T., nauchnyy red.; BREZANOVSKAYA, L.Ya., red.; POMOMAREVA, A.M., tekhn.red.

[Significance of chlorophyll in plant nourishment] Znachenie khlorofilla v pitanii zhivotnykh. Moskva, Izd-vo "Sovetskaia Rossiia," 1957. 47 p. ([Bibliotechka] v pomoshch' lektoru, no.19)(MIRA 10:12)
(Chlorophyll)

KUDRYAVTSEV, A.A., prof.; ZAKHAROVA, F.V., kand.biolog.nauk;
ANDREYEV, M.N.

Action of small doses of radioactive phosphorus (P^{32}) on the growth and development of swine. Trudy VIEV 26:183-187 '62.
(MIRA 16:2)

1. Laboratoriya normal'noy i patologicheskoy fiziologii Vsesoyuznogo instituta eksperimental'noy veterinarii.
(Phosphorus—Isotopes)

ZAKHAROVA, F.V., kand.biologicheskikh nauk

Changes in the development of young pigs and their blood indices in atrophic rhinitis. Veterinariia 39 no.1:43-46 Ja '62. (MIRA 15:2)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.
(Swine—Diseases and pests)

ZAKHAROVA, F.V., (Candidate of Bilolgical Sciences, All-Union Institute of Experimental Veterinary Medicine)

"Changes in the development of piglets and in indicators of there blood In atrophic Rhinitis."

Veterinariya, Vol 39, no 1, Jan 1962,. pp 43

ZAKHAROVA, F.V., kand. biol. nauk

Effect of small beta radiation doses of radioactive phosphorus on the organism of sheep. Zhivotnovodstvo 21 no.11:83-88 N '59 (MIRA 13:3)
(Beta rays--Physiological effect)
(Sheep--Physiology)

ZAKHAROVA, F.V., kand. biol. nauk; SADYKHOV, D.R., aspirant

Proteins and protein fractions in sheep serum. Zhivotnovodstvo 20 no.8:31-33 Ag '58. (MIRA 11:10)

1.Laboratoriya fiziologii Vsesoyuznogo instituta eksperimental'noy veterinarii.
(Sheep--Physiology) (Blood proteins)

ZAKHAROVA, F.V., kand. biolog. nauk

Weltmann's reaction in infectious atrophic rhinitis of swine. Veterinariia 42 no.7:34-35 Jl '65. (MIRA 18:9)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

ZAKHAROVA, G.

RASHIN, Adol'f Grigor'yevich; STRUMILIN, S.G., akademik, red.; FAVSTOV, G., red.; BOCHKOVA, O., mladshiy red.; ZAKHAROVA, G., mladshiy red.; SMIRNOV, G., tekhn.red.

[Formation of the laboring class in Russia; historical and economic data] Formirovanie rabochego klassa Rossii; istoriko-ekonomicheskie ocherki. Pod red. S.G. Strumilina. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1958. 622 p. (MIRA 12:1)
(Russia--Economic conditions)
(Labor and laboring class)

PICHUGIN, Boris Fedorovich; TRUKHANOVSKIY, V.G., doktor istoricheskikh nauk, otv. red.; KEROV, V., red.; ZAKHAROVA, G., mladshiy red.; MOSKVINA, R., tekhn.red.

[British trade unions after the Second World War, 1945-1956] Britanskie tred-iuniony posle vtoroi mirovoi voiny, 1945-1956 gg. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1958. 150 p. (MIRA 12:1)
(Great Britain--Trade unions)

UMPELEV, Georgiy Aleksandrovich; BACHILO, I., red.; ZAKHAROVA, G., mladshiy red.; CHEPELEVA, O., tekhn.red.

[How the Ural Machinery Plant was born, 1928-1933] Rozhdenie Uralmasha, 1928-1933 gg. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1960. 175 p. (MIRA 14:1)
(Sverdlovsk--Machinery industry)

RAZUMOVA, Tat'yana Zotovna; BACHILO,I.,red.;ZAKHAROVA,G.,mlad.red.;ULANOVA,L., tekhn.red.
[Supplying man with material goods; growth of the prosperity of the Soviet people] Zemnye blaga - cheloveku; rost blagosostoianiia sovetskogo naroda. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1961. 185 p. (MIRA 14:12)

(Cost and standard of living)

KOLBENKOV, Nikolay Fedorovich; LAZAREVICH, L., red.; ZAKHAROVA, G., mlad. red.; MOSKVINA, R., tekhn. red.

[Improving industrial management in the U.S.S.R., 1956-1960] Sovershenstvovanie rukovodstva promyshlennost'iu SSSR, 1956-1960. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1961. 234 p. (MIRA 14:12)

(Industrial management)

VORONOVICH, Andrey Arkhipovich; BACHILO, I., red.; ZAKHAROVA, G., mlad. red.; SHIKIN, S., tekhn. red.

[Lenin's agrarian program and how it has been carried out in the U.S.S.R.]Leninskaia agrarnaia programma i ee osushchestvlenie v SSSR. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 554 p. (MIRA 14:9)

(Agricultural policy)

ACC NR: AP7002435 SOURCE CODE: UR/0219/66/000/012/0034/0036

AUTHOR: Zakharova, G.V.; Yermakova, Ye. M.; Belyayev, S. Ye.

ORG: none

TITLE: Mechanical properties of niobium and its alloys at low temperatures

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1966, 34-36

TOPIC TAGS: niobium, niobium alloy, ~~niobium alloy~~ mechanical property, ~~niobium~~ thermodynamic property/VN1 niobium alloy, VN2 niobium alloy, VN2A niobium alloy

ABSTRACT: Specimens of VN1 niobium and VN2 and VN2A niobium alloy, as-deformed, stress-relieved at 1100C, or recrystallization annealed at 1200C, were subjected to tensile and impact tests at temperatures from -253 to 20C. It was found that stress relieving had little or no effect on the mechanical properties of VN1 niobium. Recrystallization annealing lowered the tensile strength from 98 to 89 kg/mm^2, the yield strength from 95 to 88 kg/mm^2, and increased the elongation from 15 to 21% and the notch toughness from 19 to 25 kgm/cm^2 (tested at -196C), compared to as-deformed alloy. The microstructure of recrystallized VN1 niobium was

UDC: 620.17:669.293:66.974

Card 1/3

ACC NR: AP7002435

uniform and fine-grained. Alloying with molybdenum was found to raise the nil ductility transition temperature. Consequently, the molybdenum content in niobium alloys should not exceed 4%. Additional alloying of niobium-molybdenum alloys with zirconium significantly increased their ductility and notch toughness at -196C. Lowering the test temperature to -253C resulted in increased tensile and yield strength and decreased elongation and notch toughness in NV2A niobium alloy (see Fig. 1). The

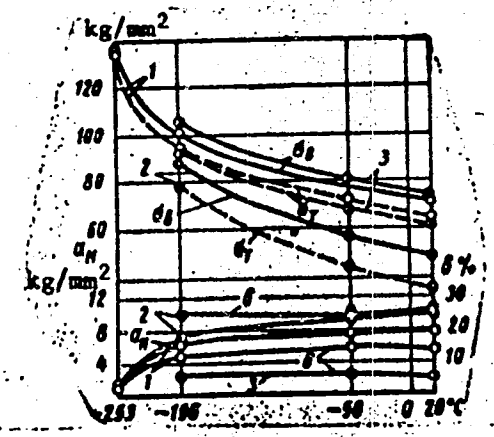


Fig. 1. Low-temperature mechanical properties of VN2A alloy (cold-rolled sheet)

1 - Annealed at 1000C for 30 min;
2 - annealed at 1300C for 1 hr;
3 - as rolled.

Card 2/3

ACC NR: AP7002435

sharp change in mechanical properties between -196 and -253C indicates that the alloy has a tendency to embrittlement. Fracture of VN2 alloy specimens was ductile at 20 and -196C, and brittle at -253. The results of tests showed that VN2A niobium alloy can be used in structures operating under multiaxial stresses at high and low temperatures. [WA-88] [TD]

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 5114

Card 3/3

KABANOV, P.I., doktor ist. nauk; YERMAN, P.K., kand. ist. nauk; KUZNETSOV, N.V., kand. ist. nauk; USHAKOV, A.V., kand. ist. nauk; ANTONOV, V., red.; ZAKHAROVA, G., mlad. red.; NOGINA, N., tekhn.red.

[Outline of the history of the Russian proletariat, 1861-1917] Ocherki istorii Rossiiskogo proletariata; 1861-1917. [By] P.I.Kabanov i dr. Moskva, Sotsekgiz, 1963. 388 p. (MIRA 16:11)
(Labor and laboring classes)

DOMARADSKIY, I.V.; BUNTIN, Ye.V.; ZAKHAROVA, O.A.

Dehydrogenases of plague and pseudotuverculosis microbes. Izv. Irk.gos.nauch.-issl.protivochum.inst. 18:83-96 '58. (MIRA 13:7)

(PASTEURELLA PESTIS) (PASTEURELLA PSEUDOTUBERCULOSIS) (BACTERIOLOGY--CULTURES AND CULTURE MEDIA) (DEHYDROGENASE)

ZAKHAROVA, G.B.; MISHINA, D.B.; VEL'MOZHNYY, E.Ya.

Niobium and its alloys [from data in foreign journals]. TSvet. met. 35 no.4:88-92 Ap '62. (MIRA 15:4)
(Niobium)

ZAKHAROVA, G. M.

Dissertation: "The Inheritance of Characteristics by Corn and Tomato Plants as a Result of Pollination with a Pollen Mixture." Cand Biol Sci, Inst of Genetics, Acad Sci USSR, 28 Jun 54. (Vechernyaya Moskva, Moscow, 18 Jun 54)

SO: SUM 318, 23 Dec 1954

ZAKHAROVA, G.M.

ZAKHAROVA, G.M.

Inheritance of characteristics in corn and tomato plants through pollination with mixed pollen. Izv. AN SSSR. Ser. biol. no.1:32-44 Ja-F '55. (MLRA 8:3)

(TOMATOES) (CORN (MAIZE)) (FERTILIZATION OF PLANTS)

ZAKHAROVA, G.M.

Inheritance of characters and qualities in tomatoes as influenced by the conditions of pollination. Trudy Inst.gen.no.23:79-88 '56. (MLRA 10:1)

(Fertilization of plants) (Tomatoes)

ZAKHAROVA, G.M.

Character inheritance in F_3 tomato hybrids obtained by fertilization with a pollen mixture. Trudy Inst. gen. no.24:164-166 '58. (MIRA 11:9)

(Tomato breeding)

ZAKHAROVA, G.M.

Effect of reduced temperatures on the vigor of spring wheat. Trudy Inst. gen. no. 27:72-74 '60. (MIRA 13:12)
(Wheat) (Plants, Effect of temperature on)

GLUSHCHENKO, I.Ye.; ZAKHAROVA, G.M.

Effect of ionizing radiations on the development of wheat and oat plants. Trudy Inst. gen. no. 27:304-310 '60.
(MIRA 13:12)

(Plants, Effect of X rays on) (Wheat) (Oats)

GLUSHCHENKO, I.Ye., akademik; ZAKHAROVA, G.M., kand.biologicheskikh nauk

Obtaining Avena fatua from Avena sativa under the influence of ionizing radiation. Agrobiologiia no. 3:402-409 My-Je '61. (MIRA 14:5)

1. Institut genetiki Akademii nauk SSSR. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni Lenina (for Glushchenko).
(Oats) (Plants, Effect of radiation on)

GLUSHCHENKO, I.Ye.; ZAKHAROVA, G.M.

Effect of X rays on the development of hybrid wheat. Trudy Inst. gen. no.28:146-152 '61. (MIRA 14:11)
(PLANTS, EFFECT OF X RAYS ON)
(WHEAT BREEDING)

ZAKHAROVA, G.M.

Study on the biological characteristics of the progeny (X_5 and X_6) of oats irradiated by X rays. Trudy Inst. gen. no.31:409-413 '64.

A case of the formation in pea hybrids of a character absent in parent plants. Ibid.:432 (MIRA 17:9)

GLUSHCHENKO, I.Ye.; ZAKHAROVA, G.M.

Development of new forms in oats under the effect of ionizing radiation. Trudy Inst. gen. no.29:164-177 '62.
(MIRA 16:7)

(Oats) (Plants, Effect of radiation on)
(Botany—Variation)

ZHKHAROVA, G.M.

ZAHAROVA, G. M., and GLOUSHCHENKO, I. E.,

"Formation Process in Avena sativa provoked by the Influence of Ionizing Radiation."

report submitted for the 11th Intl. Congress of Genetics, The Hague, Netherlands, 2-10 Sep 63

S/670/62/000/029/001/006
D291/D307

AUTHORS: Glushchenko, I.Ye. and Zakharova, G.M.

TITLE: The process of the origin of forms of oats under the influence of ionizing radiation

SOURCE: Akademiya nauk SSSR. Institut genetiki. Trudy. no. 29, 1962, 164-177

TEXT: Studies by Soviet and foreign workers have shown that fatuoid types may occur in oat populations as a result of unfavorable factors, e.g. low temperatures and chemical treatments and ionizing radiation. In an attempt to explore further the effects of the latter, dry seeds of the varieties Pobeda and Dippe, both of which have white grains and are either awnless or slender-awned, were exposed to X-ray doses of 13,000 and 8,000 r, respectively. In both cases, the X_1 and X_2 generations displayed wide variability in respect of awn characteristics, the following categories being recognized: 1) awnless, 2) awns, 3) coarse awns, 4) coarse, slightly curved awns, and 5) coarse curved awns. The progeny of nonirradi-

Card 1/2

ated control material contained only categories 1 and 2. The X_3 and X_4 generations derived from plants having the type 5 awn contained a significant proportion of fatuoids, the actual number varying in different families. The X_3 of Pobeda contained 4.3% of fatuoids and the X_4 5.5%, the corresponding figures for Dippe being 9.4 and 32.7%. One X_3 Pobeda plant and two X_3 Dippe plants bore a mixture of normal and fatuoid spikelets. No fatuoids occurred in control material or in the X_3 and X_4 derived from awnless or straight-awned plants. The occurrence of fatuoids is attributed to physiological disturbances, which results in an unstable hereditary base in forms with crude, curved awns. There are 8 figures and 6 tables.

ZAKHAROVA, Galina Nikolayevna

Changes in nervous apparatus of vermicular appendix concerning its inflammation of children

Dissertation for candidate of a Medical Science degree.
Chair of Nursery Surgery (head prof. N.V.Z akharov) and Histology (head prof. N.G. Kolosov) Saratov Medical Institute, 1950

ZAKHAROVA, G.M.

Treatment of suppurative processes of the extremities with intraarterial penicillin with novocaine. Sovet med. 17 no.5:25-27 May 1953. (CLML 24:5)

1. Candidate Medical Sciences. 2. Of the Hospital Surgical Clinic, Saratov Medical Institute (Director -- Prof. A. N. Spiridonov).

ZAKHAROVA, G.N. (Saratov, ul. Sovetskaya, d.57, kv.1)

Nerve elements of the skin of the extremities in obliterating endarteritis. Nov.khir.arkh. no.5:116-117 S-O '59. (MIRA 13:3)

1. Kafedra gospital'noy khirurgii, rukovodimaya prof. A.N. Spiridonovym, i kafedra gistologii, rukovodimaya prof. G.A. Koblovym Saratovskogo meditsinskogo instituta.
(EXTREMITIES(ANATOMY)--INNERVATION) (ARTERIES--DISEASES)

ZAKHAROVA, G.N., kandidat meditsinskikh nauk

Dispensary care of patients with endarteritis obliterans. Sov.med. 21 no.2:112-118 F '57. (MLRA 10:6)

1. Iz kliniki gospital'noy khirurgii (zav. kafedroy - prof. A.N. Spiridonov) Saratovskogo meditsinskogo instituta.

(ARTERIOSCLEROSIS OBLITERANS, ther.
in outpatient serv., follow-up)
(OUTPATIENT SERVICES
management of arteriosclerosis obliterans)

ZAKHAROVA, G.N., dotsent; BALAYEVA, L.P.

Surgery of the sympathetic trunk in endarteritis obliterans.
Sov.med. 23 no.6:74-79 Je '59. (MIRA 12:9)

1. Iz kafedry gospital'noy khirurgii (zav. - prof.A.N. Spiridonov) Saratovskogo meditsinskogo instituta.
(SYMPATHECTOMY)
(ENDARTERITIS ther.)

ZAKHAROVA, G.N., (DOCENT) -- Saratov

"Materials on Prevention and Treatment of Obliterating Endarteritis."

Report submitted for the 27th Congress of Surgeons of the USSR, Moscow, 23-28 May 1960.

ZAKHAROVA, G.N.; BALAYEVA, L.P.

Method of operation for removal of the third left thoracic sympathetic ganglion in obliterating endarteritis. Khirurgiia 36 no.3:122-124 Mr '60. (MIRA 13:12)
(ARTERIES--SURGERY) (NERVOUS SYSTEM, AUTONOMIC--SURGERY)

ZAKHAROVA, G.N.; BALALAYEVA, L.P.

Treatment of obliterating endarteritis with hydrogen sulfide baths of the Saratov Sokolovogorskiy Spring. Vop. kur., fizioter. i lech. fiz. kul't. 28 no.4:310-312 Jl-Ag '63. (MIRA 17:9)

1. Iz kafedry gospital'noy khirurgii (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent G.N. Zakharova) Saratovskogo meditsinskogo instituta i Saratovskoy Sokolovogorskoy vodolechebnitsy (glavnyy vrach B.I. Kirkorov).

ANTONOV, A.M., prof., red.; VOL'F'KOVICH, M.P., prof., red.;
ZAKHAROVA, G.N., dots., red.; IVANOV, N.R., dots., red.;
IOFFE, I.L., prof., red.; FOY, A.M., prof., red.;
SHAMARIN, P.I., prof., red.; SHERISHORINA, S.I., prof.,red.

[Transactions of the First City Conference of Young Scientists, Medical Section] Trudy Pervoy gorodskoy konferentsii molodykh nauchnykh rabotnikov. Meditsinskaia sektsiia. Saratov, Saratovskii meditsinskii in-t, 1963. 295 p. (MIRA 18:5)

1. Gorodskaya konferentsiya molodykh nauchnykh rabotnikov. Meditsinskaya sektsiya. 1st, Saratov.

ZAKHAROVA, G.N.; AVOYAN, R.L.; STRUCHKOV, Yu.T.

Structure of the products of iodination of acenaphthene with iodine monochloride. Zhur.strukt.khim. 4 no.6:928-930 N-D '63. (MIRA 17:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

AVOYAN, R.L.; ZAKHAROVA, G.N.; AKOPYAN, Z.A.; STRUCHKOV, Yu.T.

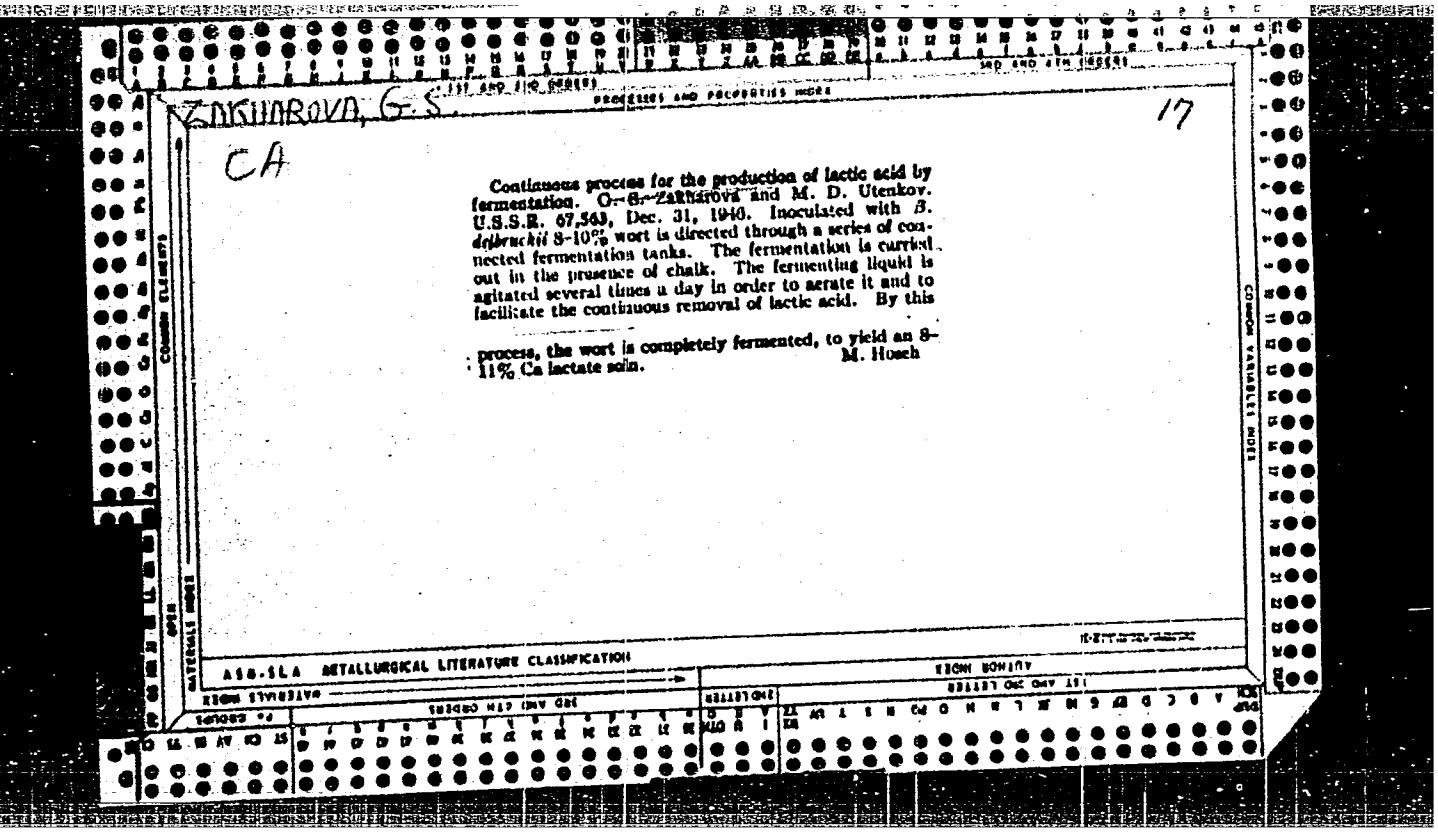
X-ray diffraction study of some organosilicon compounds.
Zhur.strukt.khim. 6 no.5:792-793 S-O '65.
(MIRA 18:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
Submitted June 20, 1965.

BOKIY, N.G.; AVOYAN, R.L.; ZAKHAROVA, G.N.; MINASYAN, M.Kh.; AKOPYAN, Z.A.; STRUCHKOV, Yu.T.

X-ray diffraction investigation of some organometallic compounds. Zhur.strukt.khim. 6 no.5:795-796 S-O '65. (MIRA 18:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
Submitted June 25, 1965.



ZAKHAROVA, G. S.

CA

17

Continuous process for the production of lactic acid by fermentation. G. S. Zakharova and M. D. Utenkov. U.S.S.R. 67,543, Dec. 31, 1940. Inoculated with *B. delbrueckii* 8-10% wort is directed through a series of connected fermentation tanks. The fermentation is carried out in the presence of chalk. The fermenting liquid is agitated several times a day in order to aerate it and to facilitate the continuous removal of lactic acid. By this process, the wort is completely fermented, to yield an 8-11% Ca lactate soln.

M. Hosch

A56-SLA METALLURGICAL LITERATURE CLASSIFICATION

BOKIY, N.G.; ZAKHAROVA, G.N.; STRUCHKOV, Yu.T.

Elementary cells and spatial groups of the acetylene and tolan reaction products with bivalent germanium and silicon derivatives. Zhur. struk. khim. 6 no.3:476-477 My-Je '65.

(MIRA 18:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

Zakharova, G.S.

ZHURAVSKIY, G.I., kandidat biologicheskikh nauk; NOVOSELOVA. L.V., mikrobiolog; YELISEYEV, M.I., inzhener-khimik; BULIKHMAN, A.A., inzhener; ZAKHAROVA, G.S., kandidat biologicheskikh nauk; ZHURAVLEVA, Ye.I., kandidat tekhnicheskikh nauk, redaktor; RYSEVA, G.B., redaktor; MEDVEDEVA, L.A., tekhnicheskiy redaktor

[Production of the food acids] Proizvodstvo pishchevykh kislot. Pod obshchef red. E.I.Zhuravlevoi. Moskva, Pishchepromizdat, 1953. 233 p. [Microfilm] (MLRA 7:10)

(Citric acid) (Tartaric acid) (Latic acid)

ZAKHAROVA, G.S.; SHMUK, V.A. [deceased]

Study of the chlorination of a mixture of boron oxide and a carbon-rich material. Trudy MKHTI no.28:125-130 '59. (MIRA 13:11)
(Boron oxide) (Carbon) (Chlorination)

ZAKHAROVA, G.V.; ZHOROVA, L.P.

Heat treatment of niobium. TSvet. met. 36 no.5:53-58 My '63.
(MIRA 16:10)

KOLOBNEV, I.F.; KRYMOV, V.V.; POLYANSKIY, A.P.; AL'TMAN, M.B., kand.tekhn. nauk, retsenzent; ZAKHAROVA, G.V., kand.tekhn.nau, retsenzent; TIKHOVA, N.M., kand.tekhn.nauk, retsenzent; ARBUZOV, B.A., inzh., retsenzent; ASTAULOV, V.S., inzh., retsenzent; BOYKOVA, L.T., inzh. retsenzent; KITARI-OGLU, G.S., inzh.retsenzenty; KRYSIN, B.T., inzh., retsenzent; LOTAREVA, O.B., inzh., retsenzent; SMIRNOVA, T.I., inzh., retsenzent; KHODOROVSKIY, G.L., inzh., retsenznet; RUBTSOV, N.N.,prof. doktor tekhn.nauk,red.; KOLOBNEV, I.F., kand.tekhn.nauk., red. SIROTIN, A.I., inzh. red.izd-va; MODEL', B.I., tekhn.red.

[Founder's handbook; shape founding with aluminum and magnesium alloys] Spravochnik liteishchika; fasonnoe lit'e iz aliuminevykh i magnievykh splavov. Pod obshchei red. N.N.Rubtsova. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 482 p. (MIRA 11:2)
(Founding) (Aluminum--Metallurgy)
(Magnesium--Metallurgy)

ACC NR: AP7002433 SOURCE CODE: UR/0219/66/000/012/0028/0031

AUTHOR: Zhorova, L. P.; Zakharova, G. V.

ORG: none

TITLE: Effect of cold working and annealing on the mechanical properties of niobium sheets

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1966, 28-31

TOPIC TAGS: niobium, ~~cold rolling, niobium warm rolling, cold rolled niobium, niobium~~ solid mechanical property, cold working, hot rolling

ABSTRACT The effect of cold rolling, direction of rolling, and annealing on the mechanical properties of niobium at room and high temperature has been investigated. Niobium ingots, 75 mm in diameter and 150 mm high, melted in a vacuum arc furnace and homogenized at 1800C in an argon atmosphere for 10 hr, were extruded at 1500C into sheet bars 35—40 mm thick, which, after reheating to 1500C, were rolled to a thickness of 12—15 mm, conditioned by machining, vacuum annealed, and rolled into sheet 1 mm thick at about 150C. Sheet specimens (50 x 10 x 1 mm) were then cold rolled with 50, 70, 80, 90 or 99% reduction without process annealing. It was found that cold rolling with a reduction of more than 70% significantly strengthened niobium. Specimens rolled with 90% reduction and tested at 20, 700, 1100, 1300, or 1500C had a tensile strength of 71—77.2, 52.6—53.2, 22—24, 9, 9.7,

Card 1/2 UDC: 669.293:621.983:621.7.011

ACC NR: AP7002433

and 7.5—8.3 kg/mm^2, respectively, compared to 50—51, 40—42, 19.5—20.5, 10.1, and 7.5—8.9 kg/mm^2 for specimens annealed at 1300C for 1 hr. Cold rolling produced a considerable anisotropy

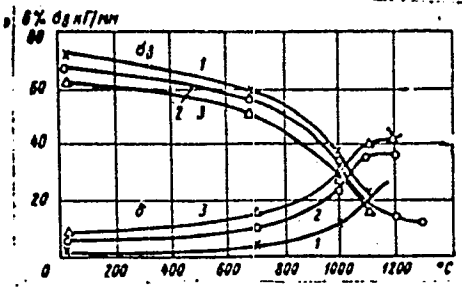


Fig. 1. Temperature dependence of mechanical properties of cold-rolled niobium sheet specimens: transverse (1), longitudinal (2), and 45° to the direction of rolling (3)

of strength and ductility (see Fig. 1), which, however, was completely eliminated by annealing at 1300C for 1 hr. Annealing at 1500—1800C increased the grain size from 0.06 to 0.9 mm. Orig. art. has: 3 figures and 3 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ATD PRESS: 5113

Card 2/2

SOV/136-59-1-16/24

AUTHORS: Zakharova, G.V., Popov, I.A., Zhorova, L.P. and Kurganov, G.V.

TITLE: Use and Properties of Niobium (Primeneniye i svoystva niobiya)

PERIODICAL: Tsvetnyye Netally, 1959, Nr 1, pp 73-79 (USSR)

ABSTRACT: After outlining the uses of niobium the authors tabulate some published (Refs 3,4) data on its physical properties. They discuss published data on the mechanical properties of the metal, noting divergencies and the absence of high-temperature (over 550°C) data, and describe their own experiments in this field. These gave more accurate room-temperature and also some high-temperature values for the cast metal. Ingots were prepared by melting 99.6-% (Nb + Ta) rods in a VIAM arc furnace at a pressure of 10^{-4} mm Hg. The ingots were deformed to 70-80% after annealing at 10^{-4} mm Hg and 1800-2000°C to remove oxygen and other gases: results are given in Table 1, and at 1400-1600°C in argon or helium. Deformation was carried out under the direction of I.G. Skugarev and S.B. Pevzner. Fig 1 shows the microstructures of the cast (left),

Card 1/3

forged, (middle) and recrystallized (right) metal. The room temperature values of tensile strength, yield-point strength, relative elongation, reduction in cross-sectional area and the hardness are given in Table 2 for niobium in the cast, pressed and pressed-and-vacuum-annealed states; Table 3 gives data for 1000, 1050 and 1100°C. Fig 2 shows the change in the time to fracture at a constant stress of 15 kg/mm^2 for the deformed and for the cast metal while Fig 3 shows the modulus of elasticity, kg/mm^2, (left hand scale, triangles, points and crosses for hardened, deformed and recrystallized specimens) and the logarithmic damping decrement for recrystallized specimens. The moduli of elasticity were determined in the Institut mashinovedeniya AN SSSR (Machine Institute of the AS USSR) under the direction of M.G. Lozinskiy. An interesting result is that the modulus does not decrease with increasing temperature; this may be due to the presence of impurities. It was found that (Table 4) with increasing oxygen content (from 0.02 - 0.24%) the tensile strength increases from

53 to 103 kg/mm^2, the yield-point strength from 40 to 99.5 and Brinel hardness from 120 to 320, while the relative elongation falls from 26 to 10%. When the carbon-content of a specimen was increased to 0.3% the tensile strength fell somewhat while the relative elongation remained sufficiently high. In the specimens used the hydrogen, nitrogen and normal carbon-contents were 0.001-0.005%, 0.005-0.01% and 0.04-0.05%, respectively. Finally, the authors outline the oxidation of niobium as reported in English (Refs 8,10,11,12) and German (Ref 9) publications.

There are 5 figures, 4 tables and 12 references, 3 of which are Soviet, 8 English and 1 German.

L 9994-63 EPR/EPF(c)/EWP(q)/EWT(m)/BDS--AFFTC/ASD--Ps-4/Pr-4--WW/JD/HM/
JG/K
ACCESSION NR: AP3000201 S/0136/63/000/005/0053/0058 70

AUTHOR: Zakharova, G. V.; Zhorova, L. P. 69

TITLE: Heat treatment of niobium

SOURCE: Tsvetnyye metally, no. 5, 1963, 53-58

TOPIC TAGS: niobium, heat treatment, homogenizing annealing, process annealing, degassing, solid-state degassing, carburization, decarburization

TEXT: A study was made of the effect of annealing conditions on the gas and carbon content of vacuum-arc-melted niobium and on the mechanical properties of semifinished niobium products. Niobium ingots (75 mm in diameter, 120-150 mm long), cut in half lengthwise, were annealed at 600-2000C for 2.5-20 hr in a vacuum furnace (0.0001 mm Hg) with tungsten heating elements. Optimum conditions for homogenizing annealing were found to be a temperature of 1800-2000C and holding time of 10 hr. Annealing under these conditions reduced the O sub 2 content from 0.02% to 0.0028%, the

Card 1/3

L 9994-63
ACCESSION NR: AP3000201

H sub 2 content from 0.0029% to 0.0012%, and the C content from 0.14-0.45% to 0.033-0.047%. It also improved the uniformity of distribution of residual impurities. The recrystallization temperature of Nb subjected to hot extrusion followed by annealing and cold upsetting with 50% and 70% reduction was determined as 1150C (for 50% reduction) and 1125C (for 70%); holding time was 1 hr in both cases. Annealing at 1300C for 1-2 hr produced maximum ductility. Higher annealing temperatures sharply reduced notch toughness and, to some extent, strength and elongation. Annealing of specimens 8 mm in diameter in a vacuum furnace with graphite heating elements (instead of tungsten) for 10 hr at 2000C eliminated O sub 2 and H sub 2 satisfactorily, but resulted in considerable surface carburization. The C content increased from 0.050-0.055% initially to 0.33% at the 0.2-mm depth, 0.20% at 1 mm, and 0.10% at the center. The carburization, however, begins at 1400C and is insignificant below this temperature. Tensile tests made on niobium sheet annealed at 1300C in a furnace with graphite heating elements showed no difference in strength characteristics in comparison with annealing in a furnace with tungsten heating elements. It is concluded that 1) ingots

Card 2/3

L 9994-63
ACCESSION NR: AP3000201

6

and large-sized semifinished products can be annealed in furnaces with graphite heating elements at temperatures as high as 1800-2000C, provided that the carburized layer is removed during further processing; and 2) semifinished niobium products can be recrystallization-annealed in furnaces with graphite heating elements at temperatures not exceeding 1300C. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 14Jun63	ENCL: 00
SUB CODE: 00	NO REF SOV: 001	OTHER: 002

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Card 3/3

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PHASE I BOOK EXPLOITATION SOV/5934

Zakharova, Galina Vasil'yevna, Ivan Alekseyevich Popov, Liliana Pavlovna Zhorova, and Boris Vladimirovich Fedin

Niobiy i yego splavy (Niobium and Its Alloys) Moscow, Metallurgizdat, 1961. 368 p. Errata slip inserted. 3700 copies printed.

Eds.: Ye. M. Savitskiy and A. S. Stroyev; Ed. of Publishing House: M. S. Arkhangel'skaya; Tech. Ed.: A. I. Karasev.

PURPOSE: This book is intended for scientific research workers, metallurgical engineers and designers concerned with the production or utilization of niobium. It may also be useful to students at metallurgical schools of higher education.

COVERAGE: The book reviews the physicochemical and mechanical properties of niobium and niobium alloys, methods of obtaining niobium in powder and consolidated form, the effect of gases on the properties of niobium, the process of niobium oxidation in air, the machining and heat treatment of niobium and its deformation, welding, metallography, and fields of application.

Card 1/

Niobium and Its Alloys SOV/5934

A large volume of material relating to equilibrium diagrams and the properties of niobium alloys is systematized. Chs. I, II, Section 1 of Ch. III, and Chs. IV, and X were written by G.V. Zakharova, Candidate of Technical Sciences; Ch. III, by B. V. Fedin; Ch. VI and VII, by I.A. Popov and L.P. Zhorova, Candidate of Technical Sciences; Ch. VIII, by L.P. Zhorova; Section 1 of Ch. IX, by G.V. Zakharova; Section 2 of Ch. IX, by Z.S. Mukhina, I.A. Popova, N.D. Yegorova, Ye. I. Nikitina, and Ye. A. Zhemchuzhina; and Section 3 of Ch. IX, by V.A. Zhabina. Each chapter is accompanied by references, Soviet and non-Soviet.

TABLE OF CONTENTS:

Card 2/8

ZAKHAROVA, I.

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Fats, Fatty Oils, Waxes, and Detergents

(3)

Analytical determination of the beginning stages of oxidative deterioration of fats. A. A. Zilov'ev and I. Zakharova. Technol. Inst. Meat Dairy Ind., Moscow). Myasnaya Ind. S.S.S.R. 24, No. 6, 37-9(1953).—Effect of processing temps. on retention of carotene (I) in fat is investigated. Eight-hr. heating of fats contg. 0.000315% I at 60, 80, and 100° reduced I to 0.000503, 0.000470, and 0.000220%, resp. Other tests show rendering at 100° under vacuum while passing in CO_2 yields a fat of high I content. M. M. Piskur

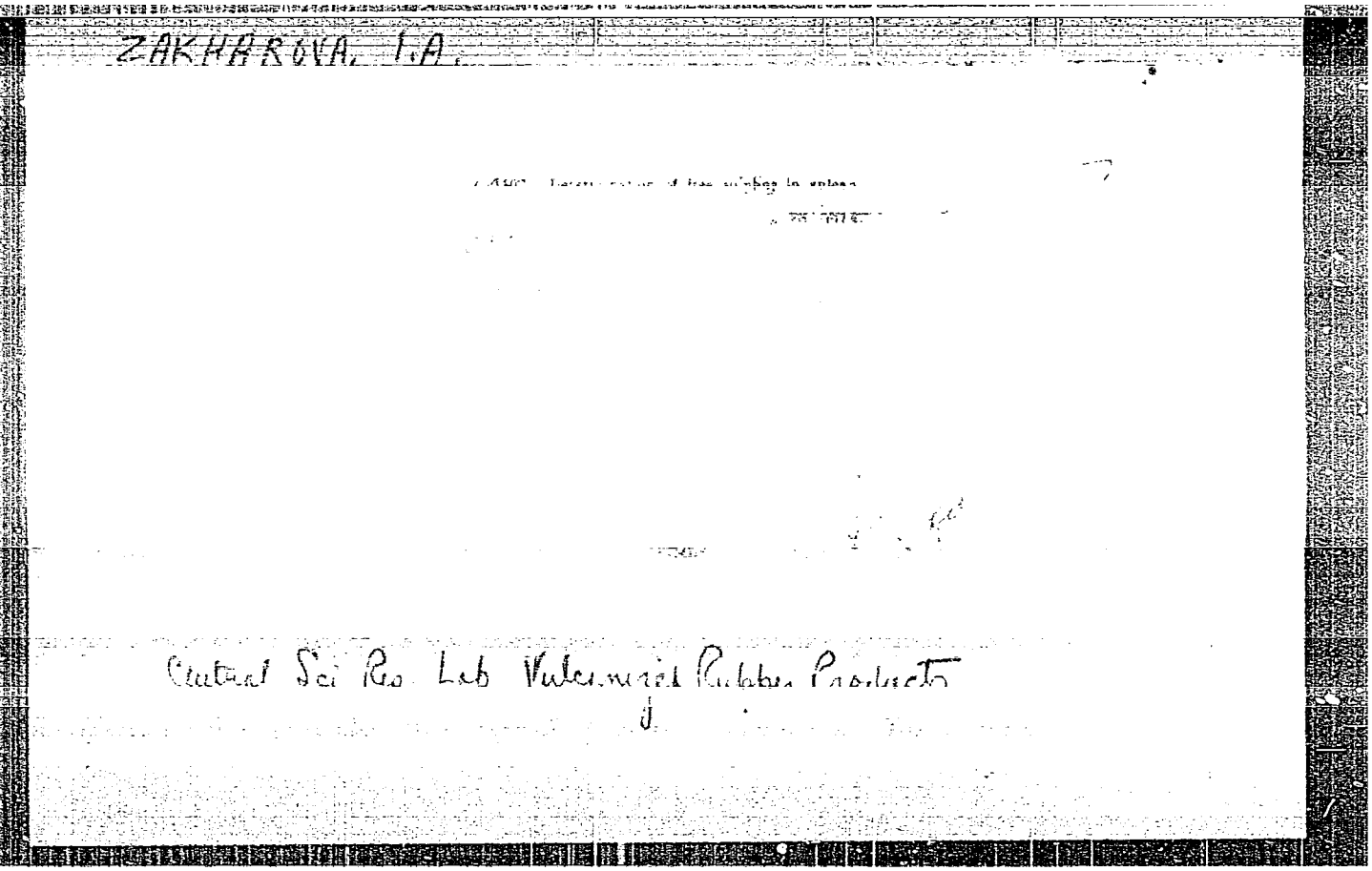
ZAKHAROVA, I.A.; MOISEYEV, I.I.

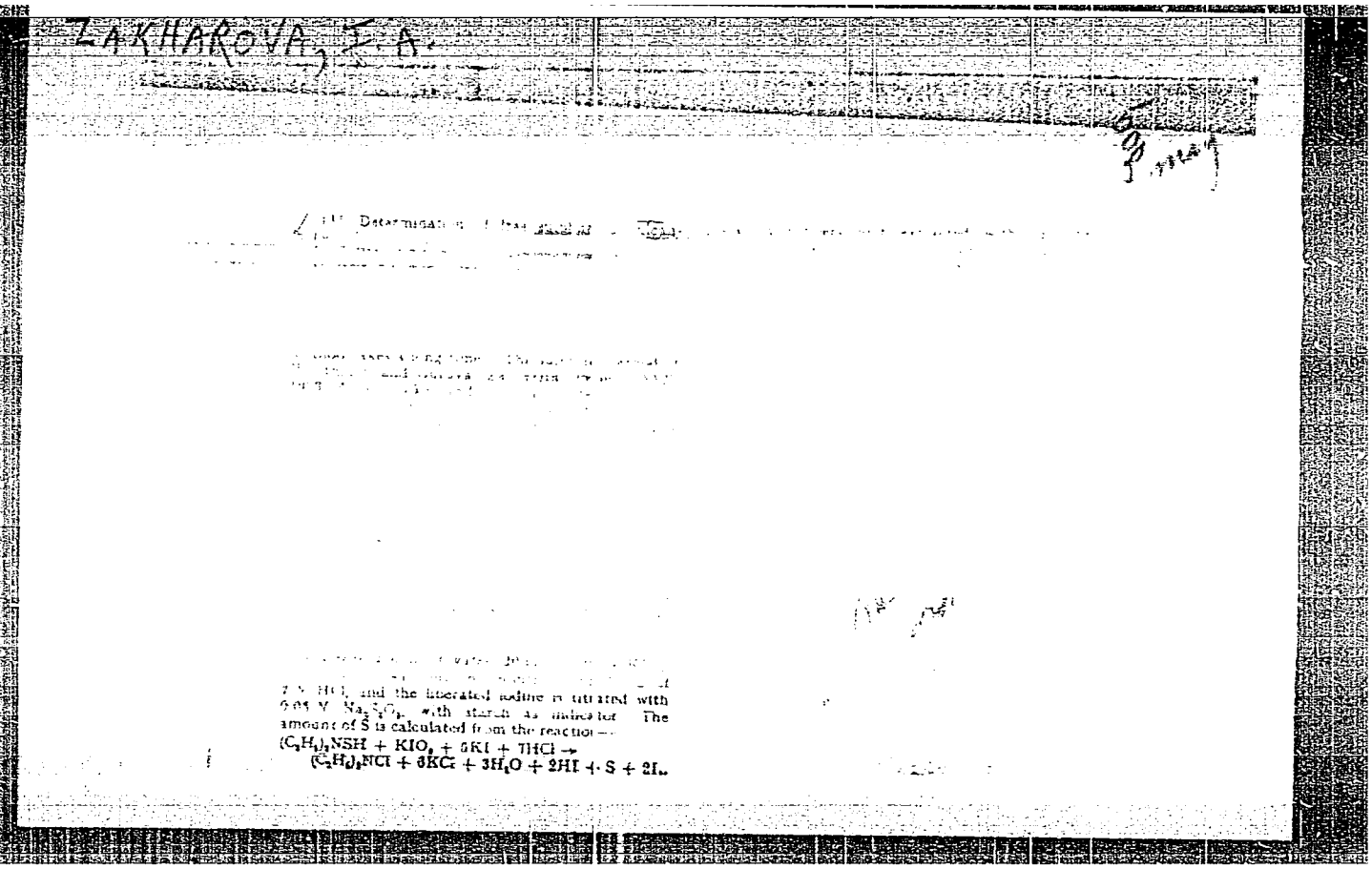
Cyclopropane derivative of palladium. Izv. AN SSSR. Ser. khim. no.10:1914-1915 O '64. (MIRA 17:12)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR.

ZAKHAROVA, I.A., MARKOVA, V.G., ZINOV'YEV, A.A.

Fusibility diagram for the binary system $NaClO_4$ - $LiClO_4$. Zhur. neorg. khim. 5 no.4:914-916 Ap '60. (MIRA13:7)
(Sodium perchlorate) (Lithium perchlorate)





ZAKHAROVA, T. A.

Determination

HCl, and the liberated iodine is titrated with 0.01 N $Na_2S_2O_3$ with starch as indicator. The amount of S is calculated from the reaction—

$$(C_2H_5)_2NSH + KIO_3 + 5KI + 7HCl \rightarrow (C_2H_5)_2NCl + 6KCl + 3H_2O + 2HI + S + 2I_2$$

5.4110

69027

AUTHORS: Zakharova, I. A., Markova, V. G., Zinov'yev, A. A.

S/078/60/005/04/024/040
B004/B016

TITLE: Melting-point Diagram of the Binary System $NaClO_4$ - $LiClO_4$

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 914 - 916 (USSR)

ABSTRACT: The authors describe the production of the preparations from the carbonates of sodium and lithium and $HClO_4$. Determination of the melting point was carried out in the device illustrated in figure 1. Figures 2, 3 show heating and cooling curves of mixtures of $NaClO_4$ and $LiClO_4$, figures 4, 5 the thermograms of $LiClO_4$ and $NaClO_4$. A table presents the melting temperatures for mixtures of the two perchlorates with a $NaClO_4$ content of 4.26 up to 100 mole%. By means of these data the melting-point diagram figure 6 was constructed. It is characterized by a simple eutectic at 71.5 mole% $LiClO_4$ with the melting point 204.5°. Solid solutions occur in the system. The temperature of the polymorphous transformation $\alpha \longrightarrow \beta$-$NaClO_4$ is reduced in the system from

Card 1/2

Melting-point Diagram of the Binary System $NaClO_4$ - $LiClO_4$

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S/078/60/005/04/024/040
B004/B016

308° down to 219°. $LiClO_4$ shows no polymorphous transformation. The mictures with more than 83 mole% $NaClO_4$ melt under decomposition. There are 6 figures, 1 table, and 2 references, 1 of which is Soviet.

SUBMITTED: December 4, 1958

Card 2/2

AUTHORS: Zinov'yev, A. A., Zakharova, I. A. SOV/78-3-10-26/35
Kondratskaya, G.P.

TITLE: Esters Produced by Combination of Perchloric Acid and Some Polyatomic Alcohols (Slozhnyye efiry khlornoy kisloty i nekotorykh mnogoatomnykh alkogoley)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2390-2394 (USSR)

ABSTRACT: Complex esters of the perchloric acid with multivalent alcohols (ethylene glycol, glycerin and pentaerythrite) were obtained by interaction of these alcohols with anhydrous perchloric acid. The esters were produced by a slow addition of alcohols to the anhydrous perchloric acid at temperatures of from -75 to -78°C. The mixture was exposed to the above-mentioned temperatures for 20-40 minutes in order to get the esters completely developed. The removal of excess perchloric acid from the reaction mixture was carried out by means of a special apparatus (Fig 1). The analysis of the reaction products was carried out by saponifying the complex esters with alkali. It was found that ethylene glycol can never be completely esterified under such conditions. Complex esters

Card 1/2

Esters Produced by Combination of Perchloric Acid and Some Polyatomic Alcohols SOV/78-3-10-26/35

were produced from glycerine and pentaerythrite. The specific weight of all complex esters produced exceeds 1,7 g/cm^3. The complex esters formed by the combination of ethylene glycol, glycerine and pentaerythrite with perchloric acid are unstable substances which explode when heated, struck or rubbed. There are 1 figure , 3 tables, and 4 references , 0 of which is Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.N.S.Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N.S.Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: December 3o, 1957

Card 2/2

ZINOV'YEV, A.A.; ZAKHAROVA, I.A.; KONDRATSKAYA, G.P.

Part 9: Esters of perchloric acid with some polyatomic alcohols. Zhur. neorg. khim. 3 no.10:2390-2394 O '58. (MIRA 12:3)

1.Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR.

(Perchloric acid) (Alcohols)

AUTHOR: Zinov'ev, A.A. and Zakharova, I.A.

TITLE: The Stability of Hydroxylamine Sulphate at High Temperatures. (K Voprosu ob Ustoychivosti Sernokislovo Gidroksilamina pri Povyshennykh Temperaturakh).

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry) Vol.II, No.2, pp.253-258. (U.S.S.R.), 1957

ABSTRACT: There is considerable uncertainty in the literature not only on melting point and the decomposition temperature of hydroxylamine sulphate but also on the chemistry of its decomposition. In the present work decomposition was shown to start at 130 - 140°C in the solid state and to proceed with evolution of heat. And thus it is NH_4HSO_4 and not the hydroxylamine sulphate which melts at 146.9°. The thermal decomposition of hydroxylamine sulphate is an extremely complex oxidation-reduction process consisting of intramolecular oxidation-reduction of the hydroxylamine and also of the oxidation of hydroxylamine by sulphuric acid. The probable overall reactions of these oxidation-reduction processes are given. 99.4% pure hydroxylamine sulphate was found to have a density of 1.91.

There are 4 references of which 2 are Russian, and 2 figs. and 2 tables.

The work was carried out at the Institute of General and Inorganic Chemistry imeni Kurnakova of the Academy of Sciences of the U.S.S.R.

Received 28th April, 1956.

Card 1/1

ZAKHAROVA, I.I.; MIKHNO, Ya.S.; KHORUNZHAYA, K.Yu.

Apparatus for softening water by means of ion exchange. Med. prom. 15 no.8:54-55 Ag '61. (MIRA 14:12)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov Ministerstva zdravookhraneniya SSSR.

(WATER—SOFTENING)

L 28030-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m) WW

ACC NR: AP5026443 SOURCE CODE: UR/0089/65/019/004/0367/0371

AUTHOR: Drozdov, V. Ye.; Zakharova, I. M.; Dobrovol'skiy, B. P.

ORG: None

TITLE: Investigation of the gamma dose rate distribution field in an irradiator composed of used reactor fuel rods

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 367-371

TOPIC TAGS: nuclear reactor, irradiation apparatus

ABSTRACT: The used or spent fuel rods from the RFT-nuclear reactor were employed for the experimental determination of the radioactivity distribution along their length. A standard TISS-dosimeter and an end-window SBT-9 counter were used for measuring gamma radiations from various rod points. The results of measurements were illustrated by a curve showing the greatest radiation of 4200 pulses per minute in the middle of the rod. The distribution field of dose rates was theoretically determined for a rod considered similar to a linear source with a cosine distribution of radioactivity. A formula was deduced and curves were plotted showing a good coincidence of experimental data with the cosine-distribution curve. The same comparison with a curve calculated on the basis of uniform distribution showed a considerable discrepancy. The authors

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Card 1/2

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4

also made experimental and theoretical investigations for irradiating arrangements composed of one old spent rod and then of 18 rods taken from the RFT-reactor. These 18 rods formed a hollow cylinder with a diameter of 90 cm and 102 cm high. The cosine-type distribution field was calculated, the formulas were derived and the distribution curves were plotted. The analysis of the curves showed that experimental results were in good agreement with the theoretical calculations. It was proven too that the distribution changed very little with time. The authors thank Yu. S. Ryabukhina (for assistance and useful advices), A. G. Vasil'yeva and V. P. Trusova (for dosimetry) and M. Ye. Yeroshova (for assistance in conducting experiments). Orig. art. has: 2 diagrams, 4 graphs, and 7 formulas.

SUB CODE: 18/ SUBM DATE: 17Nov64 / ORIG REF: 006 / OTH REF: 004

Card 2/2

S/883/62/000/000/013/020
E194/E155

AUTHORS: Georgiyevskiy, G.A., Lazarev, G.Ye., Varlamova, V.A., and Zakharova, I.M.

TITLE: Methods of studying frictional materials

SOURCE: Metody ispytaniya na iznashivaniye; trudy soveshchaniya, sostoyavshegosya 7-10 dek. 1960. Ed. by M.M. Khrushchov. Moscow, Izd-vo AN SSSR, 1962, 119-124

TEXT: Frictional materials are usually tested on rod-on-disc machines in which cooling conditions are quite different from those experienced in practice, and as temperature is particularly important in assessing high temperature frictional materials it was taken as the main criterion in a test procedure developed by the Institut mashinovedeniya AN SSSR (Institute of Science of Machines, AS USSR). The test pieces are hollow cylinders (28 mm o.d., 20 mm i.d., 15 mm long); by varying the sliding speed (0.125 - 5 m/sec) and load (2 - 40 kg/cm2) in a friction and wear machine type M-47 (I-47), frictional temperatures in the range 50 - 1200 °C can be developed in the specimens. Their housings are specially designed to control heat transfer.

Card 1/2

Methods of studying frictional ... S/883/62/000/000/013/020
E194/E155

A property known as the frictional thermal stability has been defined to characterise high-temperature brake materials; it includes plots of the coefficient of friction and the wear rate as functions of temperature; typical curves are shown. The development of aircraft disc brakes with enhanced cooling has involved tests on materials with varying amounts of coverage of the rotating surface by the brake blocks; it is shown how the effects of changes in this coverage depend on sliding speed. In tests of fire resistance and seizure, run-in specimens are tested at high sliding speeds until the material catches fire. Solid and gaseous wear products can be trapped for analysis. The microstructure of the frictional surfaces is studied. There are 5 figures and 1 table.

Card 2/2

ZAKHAROVA, I.N.; KALYUZHNYY, L.V.

Theta rhythm in the electroencephalogram of rabbits during the blocking of the components of the conditioned or nonconditioned alimentary reflex. Zhur. vys. nerv. deiat. 15 no.5:808-816 S-O '65. (MIRA 18:11)

1. Kafedra fiziologii vysshey nervnoy deyatel'nosti Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

DROZDOV, V.Ye.; ZAKHAROVA, I.M.; DOBROVOL'SKIY, S.P.

Field of dose rates from an irradiator with a gamma-ray source consisting of spent fuel rods. Atom. energ. 19 no.4:367-371 O '65. (MIRA 18:11)

VORONIN, L.G.; KALYUZHNYY, L.V.; ZAKHAROVA, I.N.

Electroencephalographic data on the role of the lateral and ventromedian nuclei of the hypothalamus in the closing of alimentary temporary connections. Zhur. vys. nerv. deiat. 15 no.2:364-373 Mr-Ap '65. (MIRA 18:5)

1. Kafedra fiziologii vysshey nervnoy deyatel'nosti Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

TYDEL'SKAYA, I.L.; MYSLAVSKAYA, I.S.; RASHBA, Ye.Ya.; ZAKHAROVA, I.Ya.

Study of C-precipitinogen in atypical streptococcal strains. Zhur. mikrobiol.,epid.i immun. 40 no.12:93-97 D '64. (MIRA 17:12)

1. Iz Ukrainskogo instituta klinicheskoy meditsiny imeni Strazhesko i Instituta mikrobiologii AN UkrSSR.

ЗАКАЗНОЙ № [illegible]

7528 *Vulcanisation of butadiene acrylonitrile rubber without sulphur* N. D. Zakharov, I. of Zakharov, and S. V. Pavlov. *Kauchuk i Rezina*, 1955, 15, No. 2, 29–9; *Plastic u. Kaut.*, 1955, 2, 201–2. The effect of vulcanisation period and temperature on the strength characteristics of butadiene-acrylonitrile rubber was investigated. For the tests, a mixture of [illegible] was used, milled for 40 to 45 min, and calendered into sheets of 2·5 to 3·5 mm thickness. Vulcanisation of test pieces was carried out in a controllable electrically-heated press. Results at 140°C showed that the process analogous to sulphur-vulcanisation already occurs at this temperature, but the physical properties of vulcanisates are considerably poorer than those of sulphur-vulcanisates. Tests at 200°C, however, gave vulcanisates whose tensile strength was somewhat lower than sulphur vulcanisates, while their elongation was equally large, *e.g.*, 2 min vulcanisation at 200°C already gave tensile strength 80 kg/sq.cm, elongation 278%, and Shore hardness 68°. Further heating gave no great improvement in properties. A chemical mechanism of cross-linking by a nitrile group to a carbon atom linked to a nitrile group in an adjacent chain is proposed.

382[12]MN21 5725

ZAKHAROVA, I. Ya.

Polysaccharide of complete antigen and other polysaccharide fractions in E. breslau and in secondary cultures regenerated from its filtrates. Report No.2: Study of the composition of polysaccharide complexes. Mikrobiol. zhur. 24 no.1:3-7 '62. (MIRA 15:7)

1. Institut mikrobiologii AN Ukrainskoy SSR.

(SALMONELLA) (ANTIGENS AND ANTIBODIES)
(POLYSACCHARIDES)