L 36985-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(t)/EWP(b) Pr-4/Ps-4
IJP(c) JD/JG
ACCESSION NR: AP5007755 S/0192/65/006/001/0058/0065

28
27
B

AUTHOR: Batsanov, S.S.; Kustova, G.N.; Ruchkin, Ye. D.; Grigor'yeva, V S.

TITLE: Optical properties of rare earth metal oxides. 2. A polythermic study of neodymium oxide

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 1, 1965, 58-65

TOPIC TAGS: rare earth oxide, oxide optical property, neodymium oxide, polymorphic transformation, neodymium nitrate, neodymium oxalate, neodymium sulfate, neodymium coordination number, neodymium oxide structure

ABSTRACT: The authors report the results of X-ray, refractometric and spectroscopic studies of Nd_2O_3 obtained by roasting neodymium nitrate, oxalate and sulfate at 600-1300C in air. The nitrate proved least and the sulfate most resistant to heat. It was shown that a sufficiently pure oxide is only obtained at 1100C. Upon dissociation of the Nd sulfate, the oxysulfate was obtained ($Nd_2O_2SO_4$) between 800 and 1000C. This was also studied. Polymorphic C→ A transformation was detected for the oxalate at 700-800C, for the nitrate at 800-900C. No such transformation was seen for the sulfate where the A-form

Card 1/3

appeared at 1100C. Under the experimental conditions, no B-form was detected. Refractometric studies showed irregular changes in density with increasing temperature; however, a decrease in density was noted for all specimens at 1200C. The maximal density between 1000 and 1100C may be related to the existence of the B-modification. The structures of the A and C form were shown to differ by the coordination numbers of the metal atom, 7 for A and 6 for C-Nd_2O_3. In spectroscopic determinations on the nitrate, the Nd-O band started at 400, corresponding to the formation of the oxynitrate, and persisted to 900C. Similar results were obtained for the oxalate. For the sulfate, the Nd-O bond appeared only around 900C, together with that of SO_4^{-2} corresponding to the existence of the oxysulfate rather than a mixture of the sulfate and oxide. The oxysulfate disappeared completely at 1100C. The 2 maxima obtained for the Nd-O bond in the sulfate suggest that isolation of SO_3 at this temperature might also yield the C-form for the sulfate. In the process of thermal dissociation of the salts, the absorption intensity v(Nd-O) was observed to increase at the beginning, due to increase in Nd_2O_3 concentration in the specimen, and then drop due to a decrease in the number of defects in the structure. Orig. art. has: 3 figures and 5 tables.

L 36985-65
ACCESSION NR: AP5007755

ASSOCIATION: Institut neorganicheskoy khimii SO AN SSSR, Novosibirsk (Institute of Inorganic Chemistry, SO AN SSSR)

SUBMITTED: 03Jan64 ENCL: 00 SUB CODE: IC, OP

NO REF SOV: 005 OTHER: 008

Card 3/3 fb

L 40108-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) WH/WW/JD/JG

ACC NR: AR6020536 SOURCE CODE: UR/0081/66/000/C03/B044/B044

AUTHOR: Baranov, B. V.; Grigor'yeva, V. S.; Kradinova, L. V.; Prochukhan, V. D. 44

TITLE: Ternary chalcogenides of type $A^{II}B_2^{III}C_4^{IV}$ B

SOURCE: Ref zh. Khim, Part I, Abs. 3B321

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 48-49

TOPIC TAGS: zinc compound, gallium compound, cadmium compound, indium compound, sulfide, crystallization

ABSTRACT: The possibility of obtaining crystals of ternary chalcogenides of type $A^{II}B_2^{III}C_4^{VI}$ (I) having a definite size and habit was investigated. Methods of gas transport reactions and recrystallization from solutions were employed. Coarse crystals of $ZnGa_2S_4$ and $CdIn_2S_4$ were obtained. The influence of group VI elements on the transport and shape of the crystals was determined; it was found that the addition of Te impurities leads to a more perfect faceting and to coarser crystals. It is shown that I can be recrystallized from salt melts containing the same component B. S. Rykova. [Translation of abstract]

SUB CODE: 07

Card 1/1

L 01050-67 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6030061 SOURCE CODE: UR/0181/66/008/009/2623/2627 52 51 B

AUTHOR: Belle, M. L.; Alferov, Zh. I.; Grigor'yeva, V. S.; Kradinova, L. V.; Prochukhan, V. D.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhnicheskoy institut AN SSSR)

TITLE: Optical reflection of gallium phosphide and gallium arsenide and their solid solutions

SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2623-2627

TOPIC TAGS: gallium arsenide, gallium, optical reflection, gallium phosphide, doublet structure, ultraviolet region structure, spin orbital, splitting

ABSTRACT: An analysis is made of the optical reflection of GaP, GaAs, and their solid solutions in the 2.0—5.0 ev region at 100 and 290K. A doublet structure was detected in the ultraviolet region of the spectrum, which shifts linearly with changes in composition. Satisfactory agreement in the distance between double components and corresponding values, determined from infrared absorption, make it possible to ascribe this doublet to the spin-orbital splitting of the Δ_6 valency band at the Γ

Card 1/2

L 01050-67
ACC NR: AP6030961

point, the corresponding transition in this case being $\Gamma_{15} \rightarrow \Gamma_{15}(E_0')$ -- the transition from the upper valency band to the second conductivity band. For GaAs we then have $E_0' = 4.46$ ev, $\Delta_0 = 0.32$ ev, and for GaP, $E_0' = 4.68$ ev, $\Delta_0 = 0.125$ ev (T = 290K). The shift in the doublet $\Lambda_3 \rightarrow \Lambda_1$ occurs linearly with a break. The doublet structure, which becomes less distinct as the content of GaP increases, is observed as far as the composition $GaP_{0.7}As_{0.3}$. Apparently, corresponding transitions occur at various points of the Λ branch for GaP and GaAs (direction [111] in the Brillouin zone). The author thanks Ye. F. Gross for his interest in this work. Orig. art. has: 1 table, and 3 figures. [Authors' abstract] [SP]

SUB CODE: 20/ SUBM DATE: 17Jan66/ ORIG REF: 001/ OTH REF: 009/

awm

Card 2/2

L 08354-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6028126 SOURCE CODE: UR/0058/66/000/005/A069/A069

AUTHOR: Goryunova, N. A.; Baranov, B. V.; Grigor'yeva, V. S.; Kradinova, L. V.; Kryukova, I. V.; Prochukhan, V. D.

TITLE: Production and investigation of GaP-GaAs and GaAs-InAs solid solutions

SOURCE: Ref. zh. Fizika, Abs. 5A557

REF. SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 7-8

TOPIC TAGS: solid solution, gallium compound, indium compound, single crystal growing, crystal impurity

ABSTRACT: The possibility is investigated of obtaining single crystals of homogeneous solid solutions in a wide range of concentrations. The crystals were grown by the gas-transport method in a closed volume. The authors elucidate the influence of such factors as the zone temperature, the temperature difference between zones, and the chemical nature of the carrier, and its concentration on the evolution of the gas-transport reactions and on the habit and dimension of the crystals are clarified. Optimal conditions are established for obtaining single crystals of the required habit. Questions involved in the doping of crystals during gas-transport reactions are studied. A. Potikov. [Translation of Abstract]

SUB CODE: 20
Card 1/1 nst

ACC NR: AR6030494 SOURCE CODE: UR/0275/66/000/006/B014/B014

AUTHOR: Goryunova, N. A.; Baranov, B. V.; Grigor'yeva, V. S.; Kradinova, L. V.; Kryukova, I. V.; Prochukhan, V. D.

TITLE: Production and investigation of GaP--GaAs and GaAs--InAs solid solutions

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 6B93

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 7-8

TOPIC TAGS: single crystal growing, semiconductor crystal, solid solution

ABSTRACT: Single crystals from solid solutions of GaP--GaAs and GaAs--InAs systems were grown by the method of gas-transport reactions in a closed space. Effects of vaporization-zone temperature, crystallizer temperature, temperature difference between the cold and hot zones, geometric factors, and chemical nature were investigated. Also the problems of crystal doping in gas-transport reactions were clarified. GaP--GaAs and GaAs--InAs single crystals were produced in a wide concentration range. Optimal conditions for producing single crystals of desirable habitus were found. A possibility of doping single crystals in the gas-transport reaction was found. Some electric properties of single crystals were measured. N. G. and others. [Translation of abstract]

SUB CODE: ~~09~~ 20

Card 1/1 UDC: 621.315.592.4:541.412

ACC NR: AP7005358 SOURCE CODE: UR/0181/67/009/001/0279/0282

AUTHOR: Alferov, Zh. I.; Garbuzov, D. Z.; Grigor'yeva, V. S.; Zhilyayev, Yu. V.; Kradinova, L. V.; Korol'kov, V. I.; Morozov, Ye. P.; Minua, O. A.; Portnoy, Ye. L.; Prochukhan, V. D.; Trukan, M. K.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Injection luminescence of epitaxial heterojunctions in the GaP-GaAs system

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 279-282

TOPIC TAGS: epitaxial growing, junction diode, gallium arsenide, gallium phosphide, photoluminescence, luminescence spectrum, PN JUNCTION

ABSTRACT: The authors use the results of an earlier investigation (FTT v. 8, 3236, 1966) of the effect of heat treatment on the photoluminescence of gallium arsenide to study the luminescence and photoluminescence spectra of n-$GaAs_{0.85}P_{0.15}$ - p-GaAs and n-GaP - p-GaAs epitaxial heterojunctions grown on substrates of gallium arsenide doped with cadmium. The measurements were made at 77K. The absolute emission intensity in the epitaxial junctions was not less than that from diodes obtained by diffusion of Zn in GaAs. The absolute intensity of the edge emission in the n-GaP - p-GaAs junctions was approximately one order of magnitude lower than in good GaAs diffusion diodes at the same currents, but there was no decrease in the case of the n-$GaAs_{0.85}P_{0.15}$ - p-GaAs junctions. This indicates that epitaxial junctions of the

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ACC NR: AP7005358

GaP - GaAs system can be so constructed as to afford highly effective unilateral injection and can thus be used for effective emitters. Triple structures n-$GaAs_{0.85}P_{0.15}$ - p-GaAs - p^+-$GaAs_{0.85}P_{0.15}$ exhibited radiation at much higher current densities than for diffusion GaAs diodes, and a sharp increase in the intensity and a narrowing down of the spectral band of the edge emission was observed with further increase of the current through the structure, probably as a result of population inversion resulting from the injection of electrons and holes from the broad-band emitters and a transition to the stimulated emission mode. No such phenomena were observed in double structures. The authors thank V. M. Tuchkevich for continuous interest, Ye. A. Gamilko, A. N. Yermakova, T. A. Potiforova, T. N. Levitskaya, T. Mkheidze, and G. I. Mirianashvili for help with the preparation of the samples and with the measurements. Orig. art. has: 3 figures. [02]

SUB CODE: 20/ SUBM DATE: 15Jul66/ ORIG REF: 004/ OTH REF: 001
ATD PRESS: 5116

Card 2/2

GRIGOR'YEVA, V.V.; ZHOLDAKOV, A.A.

Determination of the composition of complexes by the data of the metal indicator method. Ukr. khim. zhur. 30 no.1:95-102 '64. (MIRA 17:6)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

GRIGOR'YEVA, V.V.

Manufacture of parts made of cast-iron chips. [Trudy] TSNIITMASH no.56:106-114 '53. (MLRA 7:6)
(Cast iron)

GRIGOR'YEVA, V.V.

Oxidation prevention in sintering. Vop.por.met. i prochn.mat. no.1:48-56 '54. (MLRA 7:12)
(Powder metallurgy)

GRIGOR'YEVA, V.V.

Heat-resistant alloys with titanium carbide base (from foreign journals). Metalloved. i obr.met.no.2:57-58 Ag '55. (MLRA 10:1)
(United States--Heat-resistant alloys)

GRIGOR'YEVA, V. V.

Grigor'yeva, V. V.

"The complex compounds of trioxy glutaric acid with certain metals." Min Higher Education Ukrainian SSR. Kiev State U imeni T. G. Shevchenko. Kiev, 1956 (Dissertation for the degree of Candidate in Chemical Sciences)

Knizhnaya letopis'
No. 25, 1956. Moscow

GRIGOR'YEVA, V.V.

"Heat Resistant Alloys Based on Titanium Carbide". The five bibliographical entries listed for this article are all US., from the monograph Questions on Power Metallurgy and the Strength of Materials, No III, Institute of Metalloceramics and Special Alloys, Academy of Sciences Ukrainian SSR, Kiev, 1956, 145 pages

Sum. 1287

GRIGOR'YEVA, V.V.

Complex formation by [illegible] acid with some metals. I. Complex formation of [illegible] acid with trivalent iron. [illegible] A. [illegible] and [illegible]. *Zhur. Neorg. Khim.* 1, [illegible] 1956. — Optically inactive trihydroxyglutaric acid (I) reacts with eq. [illegible] to form a Fe-bearing anion. From [illegible] at low pH values (<2) and from equil. studies [illegible] Fe [illegible] where [illegible] is the [illegible] salicylate radical, with I at pH = [illegible] and of Fe salt with the disodium salt of I at pH = [illegible] optical d. and elec.-cond. data were obtained which supported the hypothesis of a complex in which the Fe : I ratio was 1 : 1. At low pH values the principal species is $H[FeC_5H_5O_7]$. At pH = 6, the anion $[FeC_5H_5O_7]^-$ is characteristic, whereas at pH = 10, the anion becomes $[FeC_5H_4O_7]^{--}$. The equil. const. for the reaction $[FeC_5H_5O_7]^- + 2H^+ \rightarrow C_5H_6O_7^{--} + Fe^{+++}$ is 0.12. At about pH = 6, the trihydroxyglutarate complex of Fe^{+++} is probably more stable than is the corresponding tartrate complex.

C. H. Fuchsman

Chair Inorg. Chem., Kiev State U.,

GRIGOR'YEVA, V.V.

Hot strength of alloys based on titanium carbide. V. V. Grigor'eva. *Voprosy Poroshkovoi Met. i Prochnosti Materialov, Akad. Nauk Ukr. S.S.R.* 1956, No. 3, 137–44.—Twenty-four alloys based on TiC (35–80%) or on a mixt. of TiC + TaC + NbC (60–95% total carbides), with 0–28% Co, 0–50% Ni, and 0–13% Cr were studied with regard to strength, toughness, and resistance to oxidation at 20–1100°. Cermets generally retain a higher proportion of their room-temp. strength when heated to high temp., than do metal alloys. Superior properties were found for TiC-Ni-Cr alloys contg. about 60% TiC, 32% Ni, and 8% Cr.
—C. L. Fuchsman

AUTHOR: Fialkov, Ya. A. and Grigor'eva, V.V.

562

TITLE: Complex Compounds of Trihydroxyglutaric Acid with Some Metals. II. Complex Compounds of Trihydroxyglutaric Acid with Divalent Copper. (Kompleksnye Soedineniya Trioksiglutarovoy Kisloty s Nekotorymi Metallami. II. Kompleksnye Soedineniya Trioksiglutarovoy Kisloty s Dvukhvalentnoy Med'yu.)

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.II, No.2, pp.287-297. (U.S.S.R.) - 1957

ABSTRACT: Indications are available that complex formation takes place between ions of divalent copper and trihydroxyglutaric acid in solution. This system, Cu^{2+} - $C_5H_8O_7$, has been studied in detail by the physico-chemical analysis method, by preparative and by physical-chemical methods. It has been established that the composition of compounds formed by the reaction of copper sulphate and trihydroxyglutaric acid in solution depends on the pH. On the basis of physico-chemical analysis data, the study of ion-transfer in electrolysis and the determination of the quantity of gram-ions of hydrogen evolved in the reaction of the components, the formula of the compound formed at pH=5 is considered to be $Na[Cu_2C_5H_3O_7]$. Two complex salts of trihydroxyglutaric acid: $Na_2[CuC_5H_4O_7]$ and $Na[CuC_5H_5O_7]$ have been isolated and studied. For the reaction $CuC_5H_4O_7^{2-} + 2H^+ = C_5H_6O_7^{2-} + Cu^{2+}$

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Complex Compounds of Trihydroxyglutaric Acid with Some Metals. II. Complex Compounds of Trihydroxyglutaric Acid with Divalent Copper (Cont.)

the equilibrium constant was found to be 5.5×10^8. In acid solution complex formation takes place mainly on account of the replacement by the metal of carboxylic-group hydrogens; in weakly acid and neutral solutions the metal ions replace both carboxylic and hydroxyl group hydrogens; in alkali solutions only hydroxylic hydrogens can be replaced by the metal. From values of the equilibrium constants it appears that the complex compounds of copper with trihydroxyglutaric acid are more stable than those with tartaric acid.

There are six references of which five are Russian.

There are 6 tables and 6 figures.

Kiev State University.
Inorganic Chemistry Section.

Received 24 Oct., 1956.

Card 2/2

GRIGOR'YEVA, V.V.

GRIGOR'YEVA, V.V.

Complex compounds of trioxyglutaric acid with certain metals. Part 3: Complex compounds of trioxyglutaric acid with cobalt and nickel. Zhur.neorg.khim. 2 no.7:1505-1510 Jl '57. (MIRA 10:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Cobalt compound) (Glutaric acid) (Nickel compound)

73-3-4/24

AUTHOR: Grigor'yeva, V. V.

TITLE: Electric Conductivity and Dissociation Constants of Trioxyglutaric Acid. (Elektroprovodnost' i Konstanty Dissotsiatsii Trioksiglutarovoy Kisloty)

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol. 23, No.3, pp. 306-309 (USSR).

ABSTRACT: The preparation and study of compounds of trioxyglutaric acid with metals was investigated as it is nearly analogous with tartaric acid. The dissociation constants of trioxyglutaric acid were determined in the hereinafter described experiment. The only available literature data on this subject were given by Roth (Ref. 1). Optically inactive xylenetrioxyglutaric acid (hereinafter called trioxyglutaric acid) was analysed and found to contain admixtures of calcium sulphate. In order to obtain a pure acid the sulphate ions were precipitated with a small excess of $Ba(OH)_2$ solution and the cations were separated subsequently from the filtrate. The purified 15% solution of the acid was condensed to one third of its original volume and mixed until the first crystals appeared. After 12 hours the product was washed with 96% alcohol, recrystallised and dried in a vacuum dessicator. A white crystal-

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73-3-4/24

tric Conductivity and Dissociation Constants of Trioxyglutaric

line powder was obtained. Analytical data gave the formula $C_5H_8O_7$. According to Roth (Ref. 1) the first dissociation constant of the acid is 6.6×10^{-4} at 25°C. He only considered the first dissociation stage of the acid. The author determined the first dissociation constant from the data on the electroconductivity of the acid and the second constant was measured from the pH of its acid salt. Electrometric titrations of a 0.025 mole solution of the trioxyglutaric acid were carried out with a 0.1 N NaOH solution. The pH was measured on a potentiometer with a hydrogen electrode (Raps-potentiometer) with a mirror galvanometer. A saturated calomel electrode was used for comparison. Results are tabulated in Table 1. The titration curves show that the first and second stage of dissociation of the acid are in close proximity. Table 1 and Figure 2 give the values of the first and second dissociation constant of trioxyglutaric acid for which the mobility of the $HC_5H_6O_7^-$ anion was calculated. Table 2 gives the values of electroconductivity of the acid within the limits of concentration of 1.0 - 0.1 mole. ($K_1 = 5.1 \times 10^{-4}$). The second dissociation constant was calculated from the concentration of the H-ions. Results

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Card 2/3

Electric Conductivity and Dissociation Constant of Trioxyglutaric Acid.

at 25°C are given in Table 3. K_2 was found to equal 3.0 x 10^{-5}. There are 3 tables, 2 figures and 8 references, 3 of which are Slavic.

SUBMITTED: October, 5, 1956.

ASSOCIATION: Kiev State University imeni T. G. Shevchenko, Chair of Inorganic Chemistry. (Kievskiy Gosudarstvennyy Universitet im. T. G. Shevchenko, Kafedra Neorganicheskoy Khimii)

AVAILABLE: Library of Congress.

SOV/137-58-10-20814

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 66 (USSR)

AUTHORS: Grigor'yeva, V.V., Klimenko, V.N., Kosolapova, T.Ya.

TITLE: Chromium Carbide as the Basis for Special-purpose Metal Ceramics (Karbid khroma kak osnova dlya metallokeramicheskikh materialov s osobymi svoystvami)

PERIODICAL: V sb.: Vopr. poroshk. metallurgii i prochnosti materialov. Nr 5. Kiyev, AN UkrSSR, 1958, pp 80-89

ABSTRACT: A presentation is made of the results of an investigation of the optimum conditions for the preparation of Cr_3C_2. It is established that use of a 1% excess of carbon black (stoichiometric composition 13.33% C) in the charge, and holding in an H_2 atmosphere at 1600°C for 2 hours in a resistance furnace with a carbon tube makes it possible to produce Cr_3C_2 containing < 3% of the lower carbides (Cr_7C_3 and $Cr_{23}C_6$). Boiling for 3 hours in dilute HCl (1:1) was used to separate the Cr_3C_2 from the lower carbides, in which case the Cr_3C_2 remained in the precipitate. The microhardness of the resultant Cr_3C_2 was 2660-2680 kg/mm^2, which is in good agreement with literature

Card 1/2

Chromium Carbide as the Basis for Special-purpose Metal Ceramics

data. The compound Cr_3C_2 +(5-20%) Ni, sintered at >1100°, revealed high mechanical properties: σ_{bi} to 55 kg/mm^2 at room temperature, σ_{bi} up to 70 kg/mm^2 at 950°, R_A 84-89.5. Resistance to oxidation at 950° on the part of materials based on Cr_3C_2 is higher than that of stainless steel. Alloys based on Cr_3C_2 may be utilized wherever hard, corrosion-resistant materials are required.

R.A.

1. Chromium carbide---Preparation 2. Chromium carbide---Separation
3. Chromium carbide---Properties 4. Ceramics---Materials

SOV/137-58-10-20807

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 65 (USSR)

AUTHORS: Grigor'yeva, V.V., Tuchak, S.S.

TITLE: Ground Titanium Carbide (Razmol karbida titana)

PERIODICAL: V sb.: Vopr. poroshk. metallurgii i prochnosti materialov. Nr 5, Kiyev, AN UkrSSR, 1958, pp 117-119

ABSTRACT: An investigation was made of the grinding of TiC powder of the following granulometric composition, in weight %: > 10 μ 14.0; 10-5 μ 34.3; 5-3μ 29.7; < 3 μ 22.0. The experiments were run in a ball mill lined with VK-8 alloy, the balls (33% of 25-mm diam and 67% of 20-mm diam) being of the same alloy. The ball loading was 2:1. After grinding for 25, 50, 75, and 100 hours in an alcohol or gasoline medium, particle size is determined by the sedimentation method due to Figurovskiy. The number of <3-micron particles attains its maximum after 50 hours of grinding, and this same period of time corresponds to the attainment of a minimum number of large particles. If grinding is continued for a longer period, it is found that the TiC particles become larger. Grinding in alcohol makes it possible to produce finer particles. Contamination of TiC with

Card 1/2

SOV/137-58-10-20807

Ground Titanium Carbide

VK-8 alloy is very insignificant (after 100 hours of grinding the amount of WC in the TiC is $\leq$ 1%).

R.A.

1. Titanium carbide powders--Preparation 2. Alcohols--Performance 3. Ball mills --Performance

Card 2/2

GRIGOR'YEVA, V. V.

18(7) PHASE I BOOK EXPLOITATION SOV/3355

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. IV (Studies on Heat-resistant Alloys, vol. 4), Moscow, Izd-vo AN SSSR, 1959. 400 p. Errata slip inserted. 2,200 copies printed.

Ed. of Publishing House: V. A. Klimov; Tech. Ed.: A. P. Guseva; Editorial Board: I. P. Bardin, Academician; G. V. Kurdyumov, Academician; N. V. Ageyev, Corresponding Member, USSR Academy of Sciences; I. A. Oding, I. M. Pavlov, and I. F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgists concerned with the structural metallurgy of alloys.

COVERAGE: This is a collection of specialized studies of various problems in the structure. metallurgy of heat-resistant alloys. Some are concerned with theoretical principles, some with descriptions of new equipment and methods, others with properties of specific materials. Various phenomena occurring under specified conditions are studied and reported on. For details, see Table of Contents. The articles are accompanied by a number of references, both Soviet and non-Soviet.

Card 10/12

10

APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051681(

PISARENKO, G.S., otv.red.; FRANTSEVICH, I.N., red.; SAMSONOV, G.V., red.; GRIGOR'YEVA, V.V., red.; YAKOVLEV, A.P., red.; KISINA, I.V., red.izd-va; MATVEYCHUK, A.A., tekhn.red.

[Transactions of the Scientific and Technical Conference on Damping of Oscillations] Trudy Nauchno-tekhnicheskogo soveshchaniia po dempfirovaniiu kolebanii. Kiev, Izd-vo Akad.nauk USSR, 178 p. 1160 (MIRA 13:12)

1. Nauchno-tekhnicheskoye soveshchaniye po dempfirovaniyu kolebaniy. 1958.
(Oscillations--Congresses) (Damping (Mechanics)--Congresses)

SAMSONOV, G.V., otv.red.; FRANTSEVICH, I.N., red.; GRIGOR'YEVA, V.V., red.; MEN'SHIKOV, A.Z., red.; KORSUNSKIY, M.I., red.; KISINA, I.V., red.izd-va; MATVEYCHUK, A.A., tekhn.red.

[Proceedings of a Conference on Heatproof Materials] Trudy Seminara po sharostoikim materialam. Kiev, Izd-vo Akad.nauk USSR. No.5. 1960. 63 p. (MIRA 13:10)

1. Seminar po sharostoykim materialam. Kiyev, 1958.
(Refractory materials)

S/139/60/000/01/013/021
E091/E255

12.6100

AUTHORS: Grigor'yeva, V. V., and Klimenko, V. N

TITLE: Hard Chromium Carbide Alloys

PERIODICAL: Tsvetnyye metally, 1960, Nr 1, pp 67-70 (USSR)

ABSTRACT: Among the metal carbides, chromium carbide is distinguished by an exceptional resistance to oxidation and by a small specific weight. Chromium forms three carbides which differ in their structure and properties. A few properties of chromium carbides are shown in Table 1. At the Institute of Powder Metallurgy and Special Alloys, Ac. Sc. Ukr SSR, new hard alloys have been developed and used successfully. They have chromium carbides as bases and nickel or nickel alloys as binders (Refs 4 to 6). Chromium carbide hard alloys are manufactured from Cr_2O_3 and Cr_3C_2 made of a mixture of chromic oxide and carbon black. The mixture of quenched and thoroughly-mixed materials weighed out in stoichiometric ratio is briquetted: the briquettes are placed in a carbon case which is transferred to a furnace with an angular tube through which hydrogen is passed. The case with the mixture is heated slowly to a given temperature, held there for 1.1/2 to 2 hours, and then pushed into a refrigerator. To obtain Cr_3C_2

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Hard Chromium Carbide Alloys

the sooking temperature should be 1600°C, and for the production of Cr_3C_2 it should be 1400°C. The chromium carbide thus obtained is milled in a ball mill and sieved, the chromium carbide alloys are supplied as bricks, billets or finished articles (Fig 1). The mixture of chromium carbide powders and nickel or a nickel alloy is compressed and the articles thus obtained are sintered at a high temperature in a controlled atmosphere. The nickel or nickel alloy content is between 5 and 40%, the rest being chromium carbide. The structure of the chromium carbide alloy consists of carbide grains surrounded by a nickel-chromium alloy (Fig 2). Chromium carbide alloys possess (1) good hardness at room temperature and elevated temperatures (90 R$_A$ at room temperature and [illegible] kg/mm^2 at 1100°C, see Fig 3), (2) an excellent resistance to oxidation in air up to 1100°C, (3) [illegible] corrosion resistance in acids, bases, sea water, petroleum products and other alkaline media, (4) good resistance to abrasive wear and (5) good resistance against erosion. The density [illegible] of a chromium carbide alloy is 7 g/cm^3.

Card 2/5

S/136/60/000/01/015/021
E091/E255

Hard Chromium Carbide Alloys

ie this alloy is twice as light as tungsten carbide hard alloys. The UTS of chromium carbide alloys in bending is 70 kg/mm^2; at 1000 °C it is 40 kg/mm^2; in compression at room temperature it is above [illegible] kg/mm^2. The alloys are non-magnetic: their mean coefficient of linear [illegible] in the temperature range [illegible] to [illegible] is close to that of steel, ie (11 to 12) x 10^{-6} mm/deg. The thermal conductivity of an alloy containing 15% metal is [illegible] cal $cm^{-1} sec^{-1} deg^{-1}$, and the electrical conductivity at 20 °C is 1.4 x 10^{4} [illegible]. The alloys can be [illegible]-soldered to steel. [illegible] of solders recommended for this purpose are [illegible] in Table [illegible] (Ref [illegible]). The alloys take an excellent polish and keep it on heating to high [illegible]. [illegible] working to [illegible] size and shape is possible [illegible] and sintering of the billets [illegible] at [illegible] 1000 °C. There are [illegible] figures, [illegible] tables and 6 references, 4 of which are Soviet and [illegible] English.

ASSOCIATION: [illegible] UkrSSR (Institute of Powder Metallurgy and [illegible] Ac. Sc., UkrSSR)

Card 3/3

GRIGOR'YEVA, V.V., YEREMENKO, V.N.

Structure and properties of materials on a silicon carbide base; materials prepared by siliconizing graphite. Vop. por. mat. i prochn. mat. no.8:38-48 '60. (MIRA 13:8)
(Silicon carbide)
(Powder metal processes)

GRIGOR'YEVA, V.V., YEREMENKO, V.N.

Structure and properties of materials on a silicon carbide base; preparation and properties of materials not containing free carbon. Vop. por. met. i prochn. mat. no.8:55-60 '60. (MIRA 13:8)

(Silicon carbide)
(Metal powder products)

GRIGOR'YEVA, V.V., YERMENKO, V.N., LUK'YANETS, A.P.

Structure and properties of materials on a silicon carbide base; investigating changes of structure and phase constitution during heating and soaking at high temperatures. Vop. por. met. i prochn. mat. no.8:61-65 '60. (MIRA 13:8)
(Silicon carbide)
(Metal powder products--Testing)

GRIGOR'YEVA, V V

PHASE I BOOK EXPLOITATION SOV/5915

Hryhor'yeva, Vera Vsevolodivna, and Vyktor Nykolayevych Klymenko

Splavy na osnovi karbidu khromu (Chromium Carbide-Base Alloys) Kiyev, Vydavn. Akademiyi nauk Ukr. RSR, 1961. 54 p. 1500 copies printed.

Sponsoring Agency: Akademiya nauk Ukrayins'koyi RSR. Instytut metalokeramiky i spetsial'nykh splaviv.

Resp. Ed.: G. V. Samsonov, Doctor of Technical Sciences; Ed. of Publishing House: I. V. Kisina; Tech. Ed.: T. R. Liberman.

PURPOSE: This booklet is intended for technical and scientific research personnel working in the machine-building and chemical industries.

COVERAGE: The booklet discusses the process of manufacturing the chromium carbide-base hard alloys and indicates the fields of their application. These alloys are also examined from the

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standpoint of their corrosion resistance in various media, oxidation resistance, abrasive wear resistance, and strength at room temperatures and elevated temperatures. Examples are given for the use of these alloys in wear-resistant parts, such as nozzles, tube-drawing dies, and forming dies. No personalities are mentioned. There are 54 references: 25 Soviet, 18 English, 7 German, 2 Czech, 1 French, and 1 Japanese.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress (TN693.C55H7)

SUBJECT: Metals and Metallurgy

Card 3/3

DV/wrc/jw
3/22/62

GRIGOR'YEVA, V.V.

PHASE I BOOK EXPLOITATION SOV/6032

Yeremenko, V. N., Resp. Ed.; I. N. Frantsevich, G. V. Samsonov, I. M. Fedorchenko, O. S. Pisarenko, V. V. Grigor'yeva, and V. I. Nizhenko, eds.

Poverkhnostnyye yavleniya v metallakh i splavakh i ikh rol' v protsessakh poroshkovoy metallurgii (Surface Phenomena in Metals and Alloys and Their Role in Powder-Metallurgy Processes) Kiyev, Izd-vo AN USSR, 1961. 213 p. 1710 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov.

Ed. of Publishing House: Z. S. Pokrovskaya; Tech. Ed.: A. M. Lisovets.

PURPOSE: This collection of articles is intended for scientific research workers, engineers specializing in metals, and metallurgists. It may also be useful to advanced students at schools of higher education.

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2

Surface Phenomena in Metals (Cont.) SOV/6032

COVERAGE: Articles of this collection discuss the role of surface phenomena in powder metallurgy processes and in processes of the strong bonding of various substances. Theoretical calculations of the surface tension of some carbides and nitrides are presented. The book also reviews modern methods for studying the surface properties of metals at high temperatures and presents data on the surface tension of refractory metals and of binary metals systems. Particular attention is given to the effect of various additives on the surface tension of metals and on the interphase tension at the boundary between metals and various refractory compounds. Data on the effect of thin metal coatings on the structural and mechanical properties of metals are also presented. No personalities are mentioned. Each article is accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

Card 2/12

32790
S/137/61/000/012/066/149
A006/A101

15 2400

AUTHORS: Grigor'yeva, V. V., Sereda, N. N.

TITLE: On interaction of titanium carbide with chromium and molybdenum

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 48, abstract 120336 ("Poroshk. metallurgiya", 1961, no. 2, 48 - 52, English summary)

TEXT: TiC+Cr+Mo alloys containing 5 to 40% metal binder (the Cr:Mo ratio varied from 1:3 to 3:1) were manufactured by hot pressing at 1,900 - 2,100°C and were then annealed at 2,000°C in argon (150 mm Hg pressure) for 3 hours. Metallographic and durometric analyses have shown that the solubility of Mo in Ti is 20 - 22%, and the solubility of Cr ≤ 7%. The hardness of carbide grains is raised by dissolving of Cr and reduced by dissolving of Mo. The alloys obtained are distinguished by great hardness at both room and high temperatures (1,100°C), and by brittleness.

Institut metallokeramiki i spetsial'nykh splavov AN USSR R. Andriyevskiy

[Abstracter's note: Complete translation]

Card 1/1

S/137/61/000/012/054/149
A006/A101

AUTHOR: Grigor'yeva, V. V.

TITLE: The Moscow Conference on mechanization and automation of sintered carbide production

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 42, abstract 12@297 ("Poroshk. metallurgiya, 1961, no. 2, 116)

TEXT: Information is given on a Conference that was organized in Moscow in November 1960 by the Combine of Sintered Carbide. Reports were delivered on: automatic lines of carbide production; new type vibrating screens, granulators, and mixers; continuous crushing in vibration mills, etc. The equipment has already been partially manufactured and is being successfully utilized at the Combine; some devices, such as furnaces and vibration mills, have as yet not been tested.

R. Andriyevskiy

[Abstracter's note: Complete translation]

Card 1/1

S/226/62/000/003/012/014
1003/1203

AUTHOR: Grigor'yeva, V. V. and Artamonov, A. Ya.

TITLE: Chromium carbide hard alloys for drawing dies

PERIODICAL: Poroshkovaya metallurgiya, no. 3, 1962, 86-88

TEXT. The friction coefficient of a chromium carbide-base hard alloy when compared with those of hardened and tempered У8А (U8A) and Р18 (R18) alloy steels and with ВК-15 (VK-15) hard alloys shows that the U8A and R18 steels are less suitable for the manufacturing of drawing dies than a chromium carbide-base powder alloy. The suitability of the latter for drawing dies was confirmed by tests, which showed that the durability of dies made of this material is 40-50 times that of carbon steel, and differs little from that of drawing dies made of the ВК-8 (VK-8) hard alloy. The new sintered chromium carbide-base alloys can be recommended for all cases of drawing without lubricants, when pressures do not exceed 600-650 kg/mm². There are 2 figures.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN USSR (Institut of Powder Metallurgy and special Alloys AS UkrSSR)

SUBMITTED: January 29, 1962

Card 1/1

GRIGOR'YEVA, V.V.

Seminar in Moscow on activated sintering. Poroshk.met. 2 no.1:101 Ja-F '62. (MIRA 15:8)
(Powder metallurgy—Congresses)

GRIGOR'YEVA, V.V.; MAYSTER, I.M.

Complex compounds of vanadyl with trihydroxyglutaric acid.
Zhur.neorg.khim. 7 no.9:2140-2148 S '62. (MIRA 15:9)
(Vanadium compounds) (Glutaric acid)

GRIGOR'YEVA, V.V.

Erosion resistance of hard alloys. Poroshmet. 3 no.3:63-70 My-Je '63. (MIRA 17:3)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

S/0226/64/000/001/0077/0080

ACCESSION NR: AP4015269

AUTHOR: Grigor'yeva, V. V.; Dubinin, V. P.; Sergeyenkova, V. M.; Osasyuk, V. V.

TITLE: Rupture strength of a hard chromium carbide alloy

SOURCE: Poroshkovaya metallurgiya, no. 1, 1964, 77-80

TOPIC TAGS: cermet, cermet rupture strength, chromium carbide alloy, chromium carbide, nickel cermet, refractory alloy, refractory cermet, chromium carbide, alloy rupture strength

ABSTRACT: Cermet specimens (Fig. 1 of Enclosure) containing 85% chromium carbide and 15% nickel were compacted from powders and sintered in hydrogen at 1373K, then subjected to stress rupture tests at 1073 and 1173K for 100 hours. Results plotted graphically (Fig. 2 of Enclosure) are compared with data for the heat-resistant alloy EI437B and indicate a substantial difference in rupture strength of the two materials at 1073K, which decreases as the temperature is increased to 1173K. Orig. art. has: 3 figures and 1 table.

Card 1/1

ACCESSION NR: [illegible]69

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute for Problems in the Science of Materials AN UkrSSR)

SUBMITTED: 2[illegible]63 ENCL: 02

SUB CODE: [illegible] NO REF SOV: 001 OTHER: 000

Card 2/4

ACCESSION NR: AP4015269 ENCLOSURE: 01

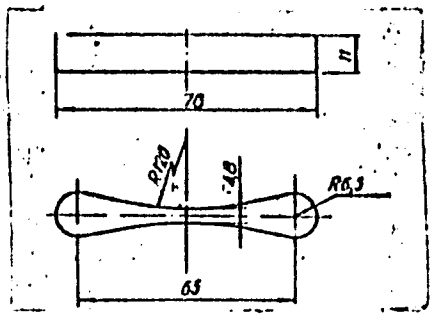

Figure 1. Specimen for stress rupture test.

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ENCLOSURE: 02

ACCESSION NR: AP4015269

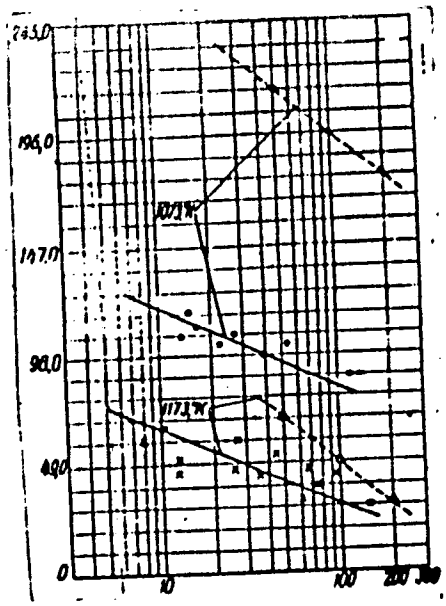

Figure 2. Results of stress rupture tests.

_____chromium carbide alloy

----------heat resistant alloy EI437B

use "stress, mn/m^2" vertically and "time, hours" horizontally

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L-57722-65 EPF(c)/EPR/EWG(j)/EWP(k)/EWP(z)/EWA(c)/EWT(m) EWP(b)/T/EWA(d)/
ACCESSION NR: AR5015162 EWP(e)/EWP(t) Pf-4/ UR/0137/65/000/005/G034/G034
Pr-4/Ps-4/Pad IJP(c) JD/HW

SOURCE: Ref. zh. Metallurgiya, Abs. 5G201

AUTHOR: Grigor'yeva, V. V.; Sergeyenkova, V. M.

TITLE: Hardening of metals with oxides

CITED SOURCE: Tr. 7 Vses. nauchno-tekhn. konferentsii po poroshk. metallurgii. Yerevan, 1964, 220-224.

TOPIC TAGS: hardening method, metal hardness, oxide, nickel, powder metal, aluminum oxide, aluminum hydroxide, nickel oxide, microstructure, inclusion

TRANSLATION: The properties of nickel hardened with dispersed inclusions of Al_2O_3 were investigated. The inclusions of Al_2O_3 were introduced into nickel powder by mechanical mixing of the powder and precipitation of aluminum hydroxide. Mechanical mixing of nickel powder with a particle size of 40 microns with Al_3O_2 powder was carried out for 50 hrs. The mixtures were dried at 120-170° and reduced in a hydrogen atmosphere at 400° for 6 hrs. The aluminum hydroxide precipitated nickel oxide in the powder. The mixture was also dried and reduced. The mixtures obtained contained 1, 3, 5 and 10% Al_2O_3. Pressed briquets were

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L-57722-65

ACCESSION NR: AR5015162

sintered in a vacuum for 1 hr at 1200-1400° and worked at 1000° with a reduction of 85%. With the mechanical method of introduction, the Al_2O_3 inclusions were present in the samples in the form of the alpha modification, while with precipitation of aluminum hydroxide, they were present in the form of the gamma modification. During the sintering period the size of the Al_2O_3 particles increased. Under hot working with pressure, pulverization of the dispersed particles took place. In sintered samples, the Al_2O_3 particles were located at the boundaries of the nickel grains. In pressure working, redistribution of the oxide particles took place. An increase in the content of Al_2O_3 inclusions was accompanied by almost no increase in hardness of the alloy. Alloys with high mechanical properties were obtained from mechanical mixtures of nickel powders and $NiO \cdot Al_2O_3$ spinels, after sintering at 1300°. In this case, no change took place in the particle size of the Al_2O_3 particles in the sintering process. V. Shelamov.

SUB CODE: MM ENCL: 00

Card 2/2

GRIGOR'YEVA, V.V.; KONDRATYUK, S. Ye.

Trihydroxyglutarate complexes of vanadium (III). Zhur. neorg. khim. 9 no.11:2578-2584 N '64 (MIRA 18:1)

L 2099-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c) JD/HW
ACCESSION NR: AP5022547 UR/0226/65/000/009/0081/0090

AUTHOR: Grigor'yeva, V. V.; Savitskiy, K. V.; Zhdanova, V. N.; Kulikov, V. A.; Sergeyenkova, V. M.; Savitskiy, A. P.; Itin, V. I.; Kozlov, Yu. I.

TITLE: Resistance to deformation and stability of deformation-induced distortions of sintered powder alloys

SOURCE: Poroshkovaya metallurgiya, no. 9, 1965, 81-90

TOPIC TAGS: sintered nickel alloy, aluminum oxide containing alloy, dispersion strengthened alloy, alloy deformation resistance, deformation induced distortion, distortion stability, alloy microhardness

ABSTRACT: Compacts of powders of pure nickel and nickel with 1, 3, and 5% of α-Al_2O_3 or γ-Al_2O_3 were sintered at 1200—1400C in a hydrogen atmosphere and tested for compressive strength under compression at a rate of 0.15 mm/min with a reduction of up to 30% at 20 and 500C. The stability of deformation-induced distortions was investigated by measurements of the microhardness of specimens vacuum annealed in the 200—1050C range. The room-temperature compressive strength of sintered nickel alloys with up to 5% Al_2O_3 was slightly higher than that of pure sintered nickel, and the difference was somewhat greater at 500C. At both test temperatures,

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L 2099-66
ACCESSION NR: AP5022547

the compressive strength was higher in alloys containing α-Al_2O_3 and slightly increased in all alloys as the Al_2O_3 concentration increased. The size of Al_2O_3 particles had practically no effect on the room-temperature compressive strength, but at 500C the compressive strength of alloys increased appreciably as the particle size of Al_2O_3 decreased from 2 to 1 μ. The type of Al_2O_3 modification had the most sharply pronounced effect on the compressive strength. For example, an alloy with 3% α-Al_2O_3 had a compressive strength of about 65 and 36 dan/mm^2 at 20 and 500C, respectively, compared with 58 and 28 dan/mm^2, respectively, for an alloy with 3% γ-Al_2O_3. Low-temperature annealing (at up to 300—400C) produced an equally slight increase in the hardness of both nickel and Ni-Al_2O_3 alloys deformed 30% at 20C. Annealing at temperatures higher than 400C decreased the hardness of sintered nickel and all Ni-Al_2O_3 alloys. However, the hardness of cold-deformed Ni-Al_2O_3 alloys after high-temperature annealing remained higher than that of identically treated sintered nickel. The hardness level of Ni-Al_2O_3 alloys increased with higher content and fineness of Al_2O_3 powder. The maximum softening of Ni and Ni-γ Al_2O_3 alloys occurred at the same temperature, while the temperature of maximum softening of Ni-α Al_2O_3 alloys was about 100C higher. The higher temperature stability of the deformation-induced distortions and a higher compressive

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L 2099-66

ACCESSION NR: AP5022547

strength at room and elevated temperatures favor the use of sintered Ni-α Al_2O_3 alloys. Orig. art. has: 8 figures and 5 formulas. [MS]

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute of Problems of the Science of Materials, AN UkrSSR); Sibirskiy fiziko-tekhnicheskiy institut im. V. D. Kuznetsova (Siberian Physicotechnical Institute)

SUBMITTED: 02Feb65 ENCL: 00 SUB CODE: MM

NO REF SOV: 006 OTHER: 014 ATD PRESS: 4113

Card 3/3

SAMSONOV, G.V., otv. red.; GRIGOR'YEVA, V.V., kand. tekhn. nauk, red.; YEREMENKO, V.N., red.; NAZARCHUK, T.N., kand. khim. nauk, red.; FEDORCHENKO, I.M., akademik, red.; FRANTSEVICH, I.N., akademik, red.; YAROTSKIY, V.D., red.; GILELAKH, V.I., red.

[High-temperature inorganic compounds] Vysokotemperaturnye neorganicheskie soedineniia. Kiev, Naukova dumka, 1965. 471 p. (MIRA 18:12)

1. Akademiia nauk URSR, Kiev. Instytut problem materialoznavstva.
2. Chlen-korrespondent AN Ukr.SSR (for Yeremenko, Samsonov).
3. Akademiya nauk Ukr.SSR (for Fedorchenko, Frantsevich).

ACC NR: AP7004394 (A) SOURCE CODE: UR/0226/67/000/001/0031/0036

AUTHOR: Savitskiy, K.V.; Grigor'yeva, V.V.; Kulikov, V.A.; Savitskiy, A.P.; Sergeyenkova, V.M.

ORG: Siberian Physicotechnical Institute im. V.D. Kuznetsov (Sibirskiy fiziko-technicheskiy institut)

TITLE: Investigation of the properties of extruded nickel-aluminum oxide alloy

SOURCE: Poroshkovaya metallurgiya, no. 1, 1967, 31-36

TOPIC TAGS: nickel alloy, ~~dispersion strengthened nickel alloy~~, aluminum oxide ~~containing alloy, nickel alloy property~~ powder metal sintering, powder metal compaction, metal extrusion, grain growth, porosity

ABSTRACT:

A mixture of metallic nickel and various amounts of aluminum oxide powders (1—5%) was compacted under a pressure of 15 kg/cm^2 into billets 25 mm in diameter and 35 mm long. One group of billets was sintered in hydrogen atmosphere at 1000°C for 2—3 hr and extruded into bars 10 mm in diameter. Another group was sintered at 1300°C without subsequent extrusion. Specimens, 6.5 mm in diameter and 10.5 mm in length, cut from the billets, were annealed at 700°C for 2 hr. It was found that alloying with aluminum oxide

Card 1/2 UDC: none

ACC NR: AP7004394

prevents grain growth. Extruded specimens, however, had a finer grain and block structure and higher density than sintered billets. Sintered specimens containing 1% aluminum oxide retained up to 6% of their porosity, while the porosity of extruded specimens was practically nil. Alloying with aluminum oxide also increased the compression strength, particularly in the case of extruded alloys. For instance, the deformation pressure for 10% reduction of extruded powdered nickel specimens was 28 kg/mm^2, that for sintered nickel alloy specimens (containing 3% Al_2O_3) was 43 kg/mm^2, and that for extruded alloy specimens of the same composition was 54.5 kg/mm^2. Orig. art. has: 2 figures and 3 tables. [TD]

SUB CODE: 11/ SUBM DATE: 04Aug66/ ORIG REF: 008/ OTH REF: 001
ATD PRESS: 5116

Card 2/2

BOGDANOV, N.N., kand.tekhn.nauk; VORONA, D.A., inzh.; GALYNKER, I.S., doktor tekhn.nauk; GAMBURG, D.Yu., kand.khim.nauk; GRIGOR'YEVA, Ye.A., inzh.; ZYKOVA, V.P., inzh.; RYABTSEV, I.I., kand.tekhn. nauk; SERGEYEV, B.F., kand.tekhn.nauk; STANKEVICH, P.I., kand. tekhn.nauk; LARIONOV, G.Ye., tekhn.red.

[Gasification of milled peat] Gazifikatsiia frezernogo torfa. Moskva, Gos.energ.izd-vo, 1959. 119 p. (MIRA 13:3)
(Peat gasification)

GRIGOR'YEVA, Ye. A.

"The Mixed Problem for a Parabolic System of Equations." Cand Phys-Math Sci, Mathematics Inst imeni V. A. Steklov, Acad Sci USSR, Moscow 195[illegible]. (KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

GRIGOR'YEVA, Ye.A.; VORONA, D.A.

Changes in the fractional composition of the solid phase in a unit for the heat treatment of milled peat with a solid heat-transfer agent. Energotekh. ispol'. topl. no.2:153-159 '62. (MIRA 16:5)
(Peat--Drying)

20-119-4-6/59

AUTHOR: Grigor'yeva, Ya.A.

TITLE: The Straight-Line Method in Mixed Problems for Parabolic Systems (Metod pryamykh v smeshannykh zadachakh dlya parabolicheskikh sistem)

PERIODICAL: Doklady Akademii Nauk USSR, 1958, Vol 119, Nr 4, pp 648-651 (USSR)

ABSTRACT: Let the system of equations

$$\frac{\partial u_i}{\partial t} = a_i \frac{\partial^2 u_i}{\partial x^2} \qquad i = 1,2,\ldots, m$$

be solved for homogeneous or inhomogeneous boundary value conditions of different kind by the set up

$$\frac{\partial u_i}{\partial t} = \frac{u_i(x,t) - u_i(x,t-h)}{h}$$

and then by the solution of ordinary equations. On the boundary one obtains a system of algebraic equations with a matrix which is decomposed into triangular matrices.
The author proves that the limit passage from this linear algebraic system to Volterra integral equations is justified.

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The Straight-Line Method in Mixed Problems for Parabolic Systems 20-119-4-6/59

The uniform convergence of the difference operator to the integral operator is not directly proved, but it is concluded indirectly over an integral operator in the sense of Sobolev [Ref 1] . There is 1 Soviet reference.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii Nauk SSSR (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR

PRESENTED: July 1, 1957, by S.L. Sobolev, Academician

SUBMITTED: June 16, 1957

Card 2/2

KUKHARENKO, T.A. (Moskva); VVEDENSKAYA, T.Ye. (Moskva);
GRIGOR'YEVA, Ye.A. (Moskva); SAVEL'YEV, A.S. (Moskva)

Obtaining of organic acids from weathered coal. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.4:143-149 Jl-Ag '61. (MIRA 14:8)

(Organic compounds)
(Coal)

GALYTSKIY, I.S.; VOLGIN, ...; ..., Ye.A.

Method of semicoking coal fines. Biul. TSIICHM no.5:49 '61. (MIRA 14:10)

(Coke)

APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051681(

GOLUBEVA, M.S.; BERGMAN, A.G.; GRIGOR'YEVA, Ye.A.

Ternary reciprocal systems consisting of: 1) potassium and sodium acetates and thiosulfates, and 2) thiocyanates and thiosulfates of the same metals. Uch.zap. RGU 41:145-154 '58. (MIRA 15:1)
(Systems (Chemistry))

ZAKHAROV, S.V.; GRIGOR'YEVA, Ye.A.; YAKOVLEVA, L.A.

Effect of the intravenous and subcutaneous administration of royal jelly on glycemic changes in and glucose consumption by the brain. Inform.biul. o mat.moloch. no.3:3-7 '62. (MIRA 16:2)

1. Kafedra biokhimii (zav. prof. S.V. Zakharov) Yaroslavskogo meditsinskogo instituta (dir. prof. N.Ye. Yarygin).
(ROYAL JELLY—PHYSIOLOGICAL EFFECT) (BRAIN)
(GLUCOSE METABOLISM)

BAT', G. A.; GRIGOR'YEVA, Ye. A.; LEBEDEV, V. N.

"Calculation of thermal neutrons utilization coefficient in cells with complex fuel elements."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

BOGACHEVA, K.I.; BYCHKOVA, Z.N.; SHILINA, R.F.; YAKUSHEVA, Ye.F.; GRIGOR'YEVA, Ye.F.

Better methods for manufacturing pseudoionone. Trudy VNIISNDV no.5:112-113 '61. (MIRA 14:10)

(Pseudoionone)

GRIGOR'YEVA, Ye. I.

"The causes of serious spring floods and their repetition on the on the Tobol, Tura, and Irtysh rivers in the southern portion of Tyumen' Oblast." Inst of Geography, Acad Sci USSR. Moscow, 1956. (Dissertation for the Degree of Candidate in Geographical Sciences).

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GRIGOR'YEVA, Ye.I., inzh.

Quick-gripping chuck. Energomashinostroenie 4 no.4:48 Ap '58. (MIRA 11:7)

(Chucks)

VITKOVSKAYA, A.N.; GRIGOR'YEVA, Ye.M.

Reconstructive surgery of the stumps of lower extremities in children. Ortop., travm. protez. 17 no.5:16-20 S-O '56. (MLRA 10:1)

1. Iz detskoy kliniki (zav. - doktor meditsinskikh nauk L.Ye. Rukhman) Leningradskogo nauchno-issledovatel'skogo instituta protezirovaniya (dir. - prof. F.A.Kopylov)

(AMPUTATION STUMPS, in inf. and child reconstruction surg. of leg stumps)

GRIGOR'YEVA, Ye.M.

Structure of gramicidin S. V. Two forms of gramicidin, their mutual transformations and structure. N. I. Gavrilov, M. A. Poldubnaya, L. N. Akimova, and E. M. Grigor'eva (State Univ., Moscow). *Zhur. Obshchei Khim.* 26, 2029-35(1956); cf. *C.A.* 50, 14538*e*; 51, 1813*e*.—The Cu-biuret complexes of gramicidin S acidified slightly in 90% EtOH yield a monomeric form of gramicidin, with absorption max. 535 mμ (red form); with 50% EtOH there is regenerated the dimeric form of gramicidin with absorption max. 570 mμ (violet form). The red form has two free NH_2 groups. The dets. of mol. wt. were made by Barger's technique (*Ber.* 37, 1754(1904)). Gramicidin S after deamination (*loc. cit.*) behaves itself analogously to gramicidin proper in formation of Cu complexes; its monomeric form has an absorption max. 510 at mμ while the dimeric form has one at 540 mμ. G. M. Kosolapoff

GRIGOR'YEVA, Ye.M.

Histological changes in the muscles of the lower extremities in children with Little's disease. Ortop. travm. i protez. 21 no. 9:10-13 S '60. (MIRA 13:12)

1. Iz detskoy kliniki (zav. - doktor med. nauk L.Ye. Rukhman) Leningradskogo nauchno-issledovatel'skogo instituta protezirovaniya (dir. - dotsent M.V. Strukov).
(CEREBRAL PALSY) (MUSCLES)

GRIGOR'YEVA, Ye.M.

Prosthesis for children with Little's disease. Ortop.,travm. i protez. no.5:39-44 '61. (MIRA 14:8)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta protezirovaniya (dir. - dotsent M.V. Strukov, zav. klinikoy - d-r med.nauk L.Ye. Rukhman).
(PARALYSIS, SPASTIC) (PROSTHESIS)

GRIGOR'YEVA, Ye.N.

Frequency of high spring floods on the Tura, Tobol, and Irtysh Rivers from 1851 through 1950. Izv.AN SSSR Ser.geog.no.1:89-90 J-F '56 (MLRA 9:7)

1.Tyumenskiy pedagogicheskiy institut.
(Tura River--Floods) (Tobol River--Floods) (Irtysh River--Floods)

GRIGOR'YEVA, Ye.P., kandidat biologicheskikh nauk.

Flood-basin haying in Akmolinsk Province. Izv.AN Kazakh.SSR no.132: 75-90 '54. (MLRA 7:5)
(Akmolinsk Province--Meadows) (Meadows--Akmolinsk Province)

BOK, I.I.; BARBOT de MARNI, A.V.; VISLOGUZOVA, A.V.; GALIYEV, M.S.; LI, A.B.; LOMONOVICH, M.I.; YAKOVENKO, Z.V.; ASSING, I.I.; NURMANGALIYEV, A.B.; SOKOLOV, S.I.; GRIGOR'YEVA, Ye.P.; SEROV, N.P.; LEONOV, G.M.; ZAKHAROV, B.S.; ZAGAYNOV, V.I.; BOROVSKIY, V.M.; LITVINOVA, A.A.; POGREBINSKIY, M.A.; NASONOVA, O.M.; KHAYDAROV, R.M.; SUVOROVA, R.I., red.; ALFEROVA, P.F., tekhn. red.

[Ili Valley, its nature and resources] Iliiskaia dolina, ee priroda i resursy. Pod obshchei red. M.I.Lomonovicha. Alma-Ata, Izd-vo AN Kaz.SSR, 1963. 338 p. (MIRA 16:8)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut geologicheskikh nauk. 2. Nauchnyye sotrudniki Instituta geologicheskikh nauk AN KazSSR (for Bok, Barbot de Marni, Visloguzova, Galiyev, Li, Lomonovich, Yakovenko). 3. Institut pochvovedeniya AN KazSSR (for Assing, Nurmangaliyev, Sokolov, Borovskiy, Litvinova, Pogrebinskiy). 4. Institut botaniki AN KazSSR (for Grigor'yeva, Nasonova). 5. Institut zoologii AN KazSSR (for Serov). 6. Kazakhskiy politekhnicheskiy institut (for Leonov). 7. Ministerstvo sel'skogo khozyaystva KazSSR (for Zakharov). 8. Kazanskiy filial Instituta "Gidroproyekt" im. S.Ya.Zhuka (for Khaydarov).

(Ili Valley--Physical geography)

PROSTAKOVA, T.N., zaveduyushchiya otdelom; GRIGOR'YEVA, Ye.V., zaveduyushchiya stantsiyey.

Two cases of rat hymenolepiasis in children. Med.parazi paraz.bol. no.3: 278-279 My-Je '53. (MLRA 6:8)

1. Gel'mintologicheskiy otdel Osipenkovskoy gorodskoy protivomalyariynoy stantsii. (Worms, Intestinal and parasitic)

BAGROV, M.I.; GRIGOR'YEVA, Yu.D. (Lipetsk)

Primary fibrosarcoma of the heart. Vrach. delo no.11:131-133 N'63 (MIRA 16:12)

1. Tret'ya gorodskaya bol'nitsa, Lipetsk.

GRIGOR'YEV, Z.M., kandidat meditsinskikh nauk

Ways of decreasing morbidity in factories producing liquid fuel.
Gig. i san. 21 no.10:44-46 O '56. (MLRA 9:11)

1. Iz Nauchno-issledovatel'skogo instituta gigiyeny truda i professional'nykh zabolevaniy (Leningrad)
(INDUSTRIAL HYGIENE
prev. of occup. dis. in liquid fuel factories)

FIKH, B.M., kand.istor.nauk; ARZHAYEVA, L.V.; BARSEGYAN, M.V., kand. istor.nauk; GOLUB, I.P.; GRIGOR'YEVA, Z.G., kand.istor.nauk; MARASH, Ya.M., kand.istor.nauk; MARKOVSKIY, D.S., kand. istor.nauk; PESTRAK, F.S.; GOLUBTSOVA, P., red.; SLAVYANIN, I., tekhn.red.

[Grodno; historical study] Grodno; istoricheskii ocherk. Minsk, Gos.izd-vo BSSR, Red.sotsial'no-ekon.lit-ry, 1960. 150 p. (MIRA 14:3)

(Grodno--History) (Grodno--Economic conditions)

KULIK, I.I.; GRIGOR'YEVA, Z.M.

Water processing at the Moscow Coke Gas Plant. Koks i khim. no.12:58-60 '61. (MIRA 15:2)

1. Moskovskiy koksogazovyy zavod.
(Moscow--Water--Softening)

GRIGOR'YEVA, Z.N.

Some immunological indices in the leukopenic form of acute leukosis. Probl. gemat. i perel. krovi no.3:8-10 '65. (MIRA 18:10)

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1. Iz Leningradskoy gorodskoy dezinfektsionnoy stantsii i iz Instituta imeni Pastera.
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GRIGOR'YEVA-BERSHTEYN, A.O.; TIKHONOVA, V.I.

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(DIPHTHERIA, prevention and control, Schick's test in (Rus))

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1. Iz Leningradskogo instituta vaktsin i syvorotok.
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(TOXINS AND ANTITOXINS)

GRIGOR'YEVA-BERESHTEYN, A. G., (Candidate of Medical Sciences, Lieutenant Colonel of the Medical Service); KARAPETYAN, A. YE., (Candidate of Medical Sciences); SHCHERBAKOV, I. F., (Lieutenant Colonel of the Medical Service); CHIRKOVA, O. O.; and ZASYPKIN, V. YA., (First Lieutenant of the Medical Service)

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(INFLUENZA—PREVENTIVE INOCULATION) (IMMUNITY)

GRIGOR'YEVA-BERESHTEYN, A.G.; KUDYAKOVA, L.I.; KIEYFITS, A.M.

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(VACCINES) (TYPHOID FEVER—PREVENTIVE INOCULATION)
(DYSENTERY—PREVENTIVE INOCULATION)

BOGOPOL'SKIY, S.N.; GOLOUSHIN, N.S.; GRIGOR'YEVYKH, G.F.; LEVIN, L.Ya.; SMIRNOV, Yu.P.; TKACHEV, V.V.; CHISTYAKOV, V.I.; SHOLENINOV, V.M.; SHUR, A.B.; LOVETSKIY, L.V.

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