L 64484-65
ACCESSION NR: AP5021502

ENCLOSURE: 01

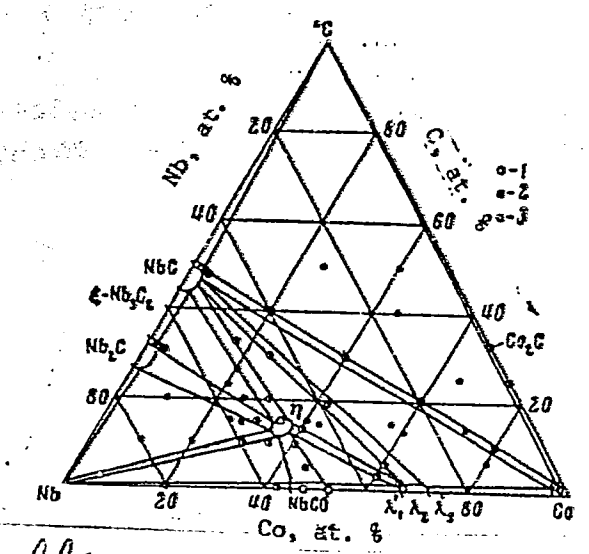
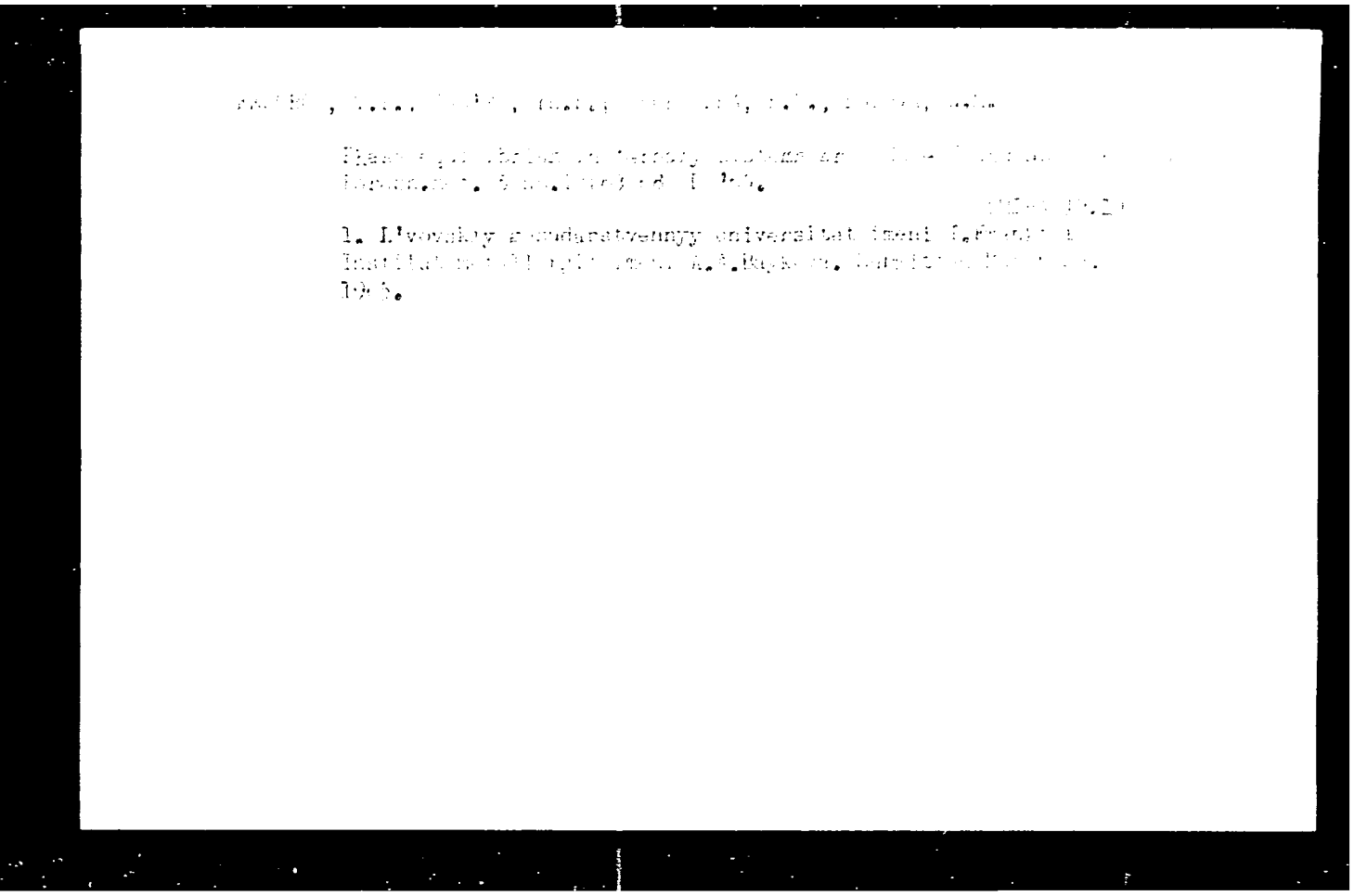


Fig. 1. Diagram of phase equilibria in the Nb-Co-C system at 1000°C. 1--single-phase alloys; 2--two-phase alloys; 3--three-phase alloys

Card 3/3

FEDOROV, T.F.; POPOVA, N.M.; GLADYSHEVSKIY, Ye.I.

Ternary systems hafnium - columbium - carbon, zirconium - columbium - carbon and titanium - columbium - carbon. Izv. AN SSSR. Met. no.3:158-163 My-Je '65. (MIRA 18:7)



POPOVA, N.M.; SOKOL'SKIY, D.V.

Nickel and mixed catalysts on carriers. Trudy Inst. khim. nauk AN Kazakh. SSR 13:3-66 '65. (MIRA 18:9)

SOKOL'SKIY, D.V.; POPOVA, N.M.; SYZDYKBAYEVA, M.B.

Platinum, palladium, and platinum-palladium catalysts on carriers for carbon monoxide oxidation. Trudy Inst. khim. nauk AN Kazakh. SSR 13:118-145 '65. (MIRA 18:9)

ZANOZINA, P.P.; POPOVA, N.M.; BIKHANOV, F.B.

Activity and selectivity of nickel-chromium catalysts on carriers in cottonseed oil hydrogenation. Trudy Inst. khim. nauk AN Kazakh. SSR 13:165-173 '65. (MIRA 18:9)

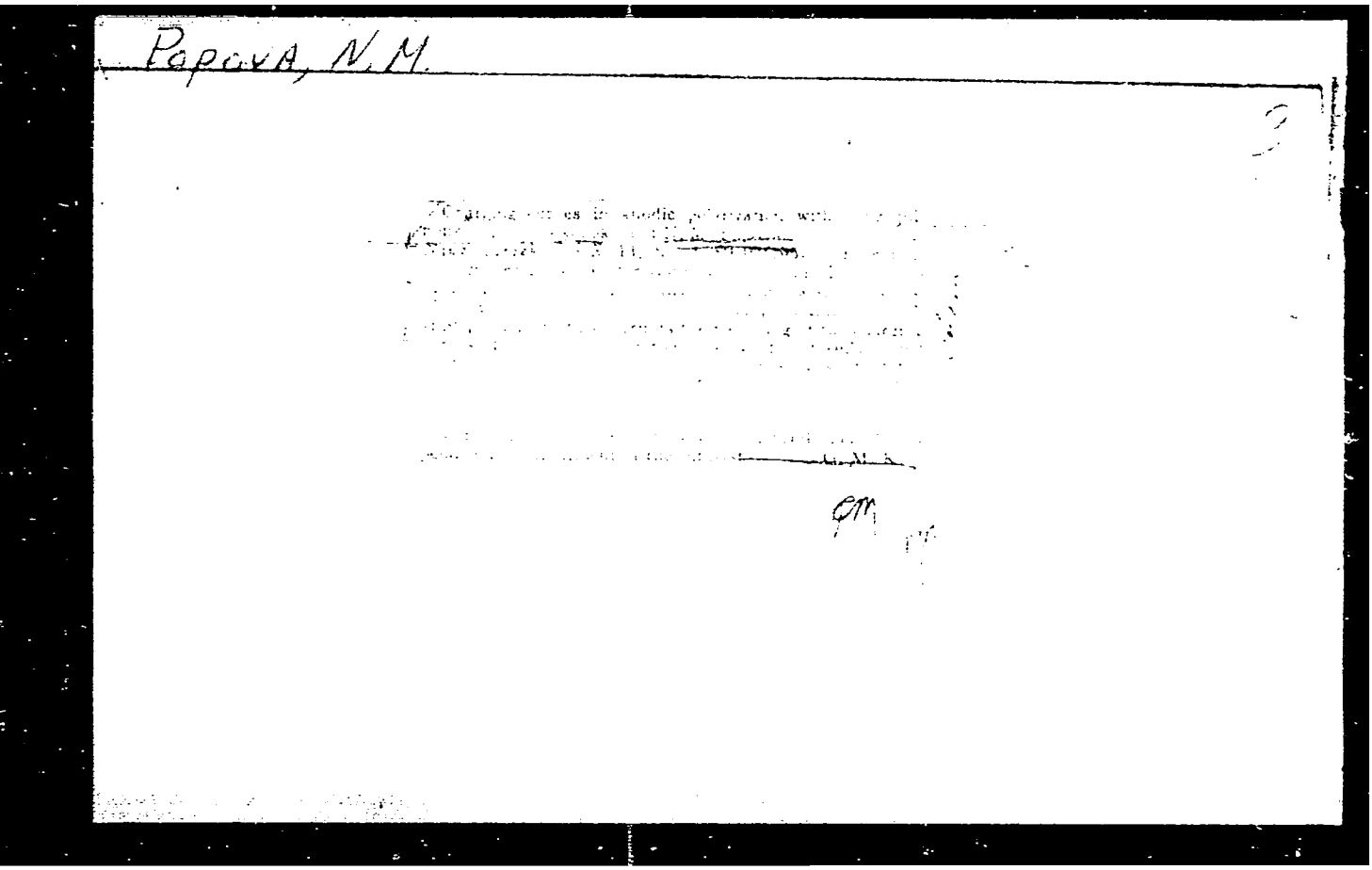
SOKOL'SKIY, D.V.; POPOV, N.I.; POPOVA, N.M.

Use of Kulan bentonite clays in the hydrogenation of cotton-seed oil under operational plant conditions. Trudy Inst. khim. nauk AN Kazakh. SSR 13:210-218 '65. (MIRA 18:9)

POPOVA, NINA Mikhaylovna DECEASED 1964
1914 - 1962

Metals

Molybdenum steel analysis



POPOVA, N. M., Cand Chem Sci -- (diss) "Hydrogenation of benzoquinone on platinum, palladium, and nickel." Alma-Ata, 1958. 14 pp with graphs (Kazakh State Univ im S. M. Kirov), 150 copies (KL, 35-58, 105)

POPOVA, N.M.; SOKOL'SKIY, D.V.

Hydrogenation of benzoquinone by sorbed hydrogen on skeletal Ni, Pt and Pd/$CaCO_3$. Trudy Inst.khim.nauk AN Kazakh. SSR 2:70-76 '58.
(MIRA 12:2)

(Hydrogenation) (Benzoquinone) (Catalysis)

POPOVA, N.M.

Charging curves during anodic polarization by quinone. Trudy Inst. khim.nauk AN Kazakh. SSR 2:77-83 '58. (MIRA 12:2)
(Quinone) (Polarization (Electricity))

POPOVA, N.M.; SOKOL'SKIY, D.V.

Hydrogenation of benzoquinone on skeletal Ni, Pt, and Pd/$CaCO_3$.
Trudy Inst.khim.nauk AN Kazakh. SSR 2:84-93 '58. (MIRA 12:2)
(Benzoquinone) (Hydrogenation) (Catalysis)

SOKOL'SKIY, D.V.; SHMONINA, V.P.; POPOVA, N.M.

Investigation of liquid-phase hydration of acetylene according to Kucherov. Part 2: State of mercury in the acid catalyst. Trudy Inst. khim.nauk AN Kazakh. SSR 3:173-181 '58. (MIRA 12:2)
(Mercury) (Catalysis)

Popova, N.M.

SAMSONOV, G.V.; POPOVA, N.M.; TIKHOMIROVA, L.I.

Preparation of cerium monosulfide. Zhur. prikl. khim. 31 no.2: 153-157 F '58. (MIRA 11:5)

(Cerium sulfides)

POPOVA, N.M.; SOKOL'SKIY, D.V.

Hydrogenation of furfurole on Ni - ZnO catalysts. Izv.AN Kazakh. SSR.Ser.khim. no.1:65-70 '59. (MIRA 13:6)
(Furaldehyde)
(Hydrogenation)

PHASE I BOOK EXPLOITATION SOV/3537

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Trudy, t. 5 (Transactions of the Institute of Chemical Sciences, Kazakh SSR, Academy of Sciences, Vol 5) Alma-Ata, Izd-vo Akademii nauk Kazakhskoy SSR, 1959. 154 p. 1,000 copies printed.

Ed.: N.D. Zhukova; Tech. Ed.: Z.P. Rorokina; Editorial Board of Series: D.V. Sokol'skiy (Resp. Ed.), V.G. Gutsalyuk, and B.V. Suvorov (Resp. Secretary).

PURPOSE: This collection of articles is intended for personnel of scientific research laboratories, laboratories of industrial enterprises, and faculty members of schools of higher education.

COVERAGE: The collection reviews problems of liquid-phase catalytic hydrogenation to upgrade and reactivate various products. Hydrogenation of unsaturated bonds of various types, adsorption of hydrogen on different catalysts, chromatographic separation of mixtures, and the effect of halogen salts of alkali metals on the rate of hydrogenation reactions promoted by various skeleton catalysts are described. Conditions of catalytic hydrogenation

Card 1/5

of natural fat, sunflower oil, and such synthetic products as esters of high-molecular fatty acids are set out. Dehydration of the butane fraction carried out in combination with isomerization is analyzed. Principles of selecting catalysts and regenerating them are reviewed and the formation of adsorption potentials on metal catalysts is explained. Each article presents conclusions drawn on the basis of experimental findings. References accompany most of the articles.

TABLE OF CONTENTS:

66872
SOV/76-33-11-35/47

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AUTHORS: Popova, N.M., Sokol'skiy, D.V.

TITLE: The Mechanism of the Hydrogenation of Benzoquinone on Pt, $Pd/CaCO_3$ and Skeleton Nickel

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2573-2578 (USSR)

ABSTRACT: Benzoquinone was hydrogenated on platinum, on palladium precipitated onto calcium carbonate, and on skeleton nickel, to clarify the reaction mechanism and to establish the stability of the contacts. The main results on the kinetics and the potentiometric measurements were already given in detail (Ref 1). The hydrogenation of quinone was carried out in dioxane, benzene, alcohol, and 0.1 n acetic acid. The course of the reaction on Pt and $Pd/CaCO_3$ (prepared according to the conventional methods (Ref 2)) is according to the zero-order to the absorption of one mol of hydrogen. The reaction medium influences the reaction rate and the end-products of the hydrogenation. The hydrogenation rate increases with Pt in the order: dioxane > alcohol > acetic acid. In opposition to $Pd/CaCO_3$ the benzene ring is hydrogenated in an acid medium on Pt at reversible hydrogen-potential to cyclohexanol. On

Card 1/3

65872

SOV/76-33-11-35/47

The Mechanism of the Hydrogenation of Benzoquinone on Pt, Pd/$CaCO_3$ and Skeleton Nickel

Pt and Pd/$CaCO_3$, quinone is hydrogenated to hydroquinone as mentioned above according to the zero-order, (with the exception of hydrogenation in acetic acid) but the potential shifts into the anode range to 0.66-0.68 v. This potential shift is caused by taking off of the adsorbed hydrogen on the surface of the catalyst and the determination of a redox potential of the system quinone - hydroquinone. The catalyst again becomes a hydrogen electrode after the hydrogenation of the quinone. The apparent activation energy of the quinone hydrogenation on Pt and Pd/$CaCO_3$ is 1-2 kcal/mol. The quinone hydrogenation at the high anode potential of the catalyst with low activation energy is explained by the data of the chemical analysis, the kinetics, and the charge curves (Fig) in the field of the electron mechanism. The catalysts investigated appear partially as electron donors and partially as electron acceptors (hydrogen activation). The activity of Pt and Pd/$CaCO_3$ does not decrease at repeated hydrogenation of quinone, while the activity of the skeleton nickel is determined by the quantity of hydrogen sorbed by it. The hydrogenation on skeleton

Card 2/3

The Mechanism of the Hydrogenation of Benzoquinone on Pt, $PdCaCO_3$ and Skeleton Nickel

66872
SOV/76-33-11-35/47

nickel is related with the instability and the poor reproducibility of the hydrogen sorbed by the nickel. Contrary to Pt and $Pd/CaCO_3$ the desorption rate of the hydrogen is considerably higher owing to the excess quinone on the skeleton nickel than the hydrogen adsorption from the gas-phase. In conclusion, papers of L.V.Pisarzhevskiy (Ref 6), Stackelberg and Weber (Ref 11), D.V. Sokol'skiy (Ref 18), Remik (Ref 15), A.I. Krasil'shchikov (Ref 20), and S.Z. Roginskiy (Ref 21) are mentioned in the article. There are 1 figure, 1 table, and 24 references, 16 of which are Soviet.

ASSOCIATION: Akademiya nauk KazSSR (Academy of Sciences of the KazSSR)

Card 3/3

S/081/61/000/020/017/089
B101/B147

AUTHORS: Popova, N. M., Sokol'skiy, D. V.

TITLE: Adsorption of hydrogen on Ni/SiO_2 catalysts

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 62, abstract 20B467 (Izv. AN KazSSR, Ser. khim., no. 1 (19), 1961, 83-90)

TEXT: The kinetics of hydrogen desorption out of Ni/SiO_2 catalysts with varying content of Ni was studied. The catalysts were reduced at 400, 500, 600, and 800°C by dehydrogenation with benzoquinone. It is shown that hydrogen sorption reaches a maximum of 16 - 17 milliliters on catalysts reduced at 500°C. Catalysts containing 20 - 40% Ni sorbed a maximum amount of hydrogen per gram of catalyst at all reduction temperatures. Adsorption per gram of nickel is strong in the range of small fillings (1.2% Ni), amounting to 400 milliliters of H_2 per g of Ni. Reduced Ni/SiO_2 catalysts are sensitive to long-lasting action of air. In order that they keep the hydrogen sorbed by them, they must be stored in an H_2 atmosphere. [Abstracter's note: Complete translation.]

Card 1/1

NECHELYUSTOV, N.V.; POPOVA, N.N.; MINTSER, E.F.

Distribution of admixture elements in the process of hypogenic mineral formation in tin-zinc and copper-molybdenum deposits of the Kara-Mazar Mountains. Trudy IMGRE no.5:3-42 '61. (MIRA 15:7)

(Kara-Mazar Mountains--Ore deposits)

S/850/62/008/000/001/004
B119/B101

AUTHOR: Popova, N. M.

TITLE: Hydrogenation of dimethyl ethynyl carbinol on Ni/SiO_2 catalysts

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk. Trudy. v. 8. Alma-Ata, 1962. Kataliticheskiy sintez monomerov. 21-36

TEXT: Dimethyl ethynyl carbinol in amounts of 0.5 ml was hydrogenated in water, 96% ethanol, 70% dioxane, and 0.1 N alcoholic KOH in the presence of 1 g of Ni/SiO_2 catalyst at 20, 40, and 55°C. The Ni content of the catalyst was varied between 1 and 100% and its reduction was carried out at 300, 400, or 500°C. The hydrogenation corresponds to a zeroth-order reaction until half the amount of hydrogen needed theoretically is consumed, after which the reaction rate drops quickly. During the reaction, the catalyst potential shifts by 100 - 130 mv in the positive direction and decreases to saturation value toward the end

Card 1/3

of the reaction. When the mixture is stirred at 700 r.p.m., the reaction proceeds in the external kinetic range. Among the catalysts reduced at 400 and 500°C, those containing 20-40% Ni are the most active (35-40 ml H_2/min per g of catalyst); among those reduced at 300°C, the one containing 60% Ni is the most active (19 ml H_2/min per g of catalyst). The specific catalytic activity is highest with Ni contents of 2-10% (240-360 ml H_2/min for catalysts reduced at 500 and 400°C). Most favorable reduction temperature: 400°C. The rate of hydrogenation depends on the solvent and decreases in the order 96% ethanol, water, 0.1 N alcoholic KOH, 70% dioxane. The hydrogenation of the triple bond to the double bond proceeds in ethanol up to 98.7 - 100% selectively with the use of catalysts containing 5-60% Ni. The temperature coefficient of the reaction is positive; the activation energy is 5-7 kcal/mole irrespective of the catalyst composition. The general activity of Ni/SiO_2 catalysts in the hydrogenation of the triple bond of dimethyl ethynyl carbinol is proportional to the variation of the catalyst potential and, therefore, to the degree of adsorption of the triple bond. There are 13 figures and 3 tables. The most important English-language

SOKOL'SKIY, D.V., akademik, glav. red.; POPOVA, N.M., kand. khim. nauk, red.; ZAKUMBAYEVA, G.D., kand. khim. nauk, red.; BULAVKINA, L.A., kand.khim. nauk, red.; GREBENKINA, G.F., kand. khim. nauk, red.; DZHARDAMALIYEVA, K.K., kand. khim. nauk, red.; GLAZYRINA, D.M., red.; ROROKINA, Z.P., tekhn.red.

[Catalytic reactions in the liquid phase] Kataliticheskie reaktsii v zhidkoi faze; trudy Vsesoiuznoi konferentsii. Alma-Ata, Izd-vo AN Kaz.SSR, 1963. 459 p. (MIRA 16:12)

1. Vsesoyuznaya konferentsiya po kataliticheskim reaktsiyam v zhidkoy faze, Alma-Ata, 1962. 2. Kazakhskiy tekhnologicheskiy institut i Institut khimicheskikh nauk AN KazSSR (for Sokol'skiy).

(Catalysis)

FOMOVA, N.M.; [illegible], I.V.; TOLSTIKOVA, L.F.

Hydrogen sorption in nickel catalysts. Izv. AN Kazakh. SSR. Ser. khim. nauk 14 no.1:60-68 Ja-Mr '64. (MIRA 18:3)

L 9642-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) LIP(c) MJW/JD/HW

ACC NR: AP5027705 SOURCE CODE: UR/0129/65/000/011/0021/0022

AUTHOR: Popova, N. N.; Sandler, N. I.; Butko, N. I.

ORG: Ukrainian Scientific Research Institute of Metals (Ukrainskiy nauchno-issledovatel'skiy institut metallov)

TITLE: Effect of rare-earth metals of the cerium subgroup on the critical cold brittleness of carbon steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1965, 21-22

TOPIC TAGS: rare earth metal cerium, carbon steel, cold brittleness, ductiliby

ABSTRACT: The results of a comparative investigation of the carbon steels 20, St. 3, and KGt. 3 with and without addition of cerium are presented. REM (rare earth metals) were added to the molten steel following its deoxidation. The REM were added in the form of ferrocerium or mischmetal containing 50-70% Ce, in proportions of 0.05, 0.07, 0.10, 0.15, 0.30, and 0.40% Ce by weight of melt. Subsequent investigation of the effect of Ce on the crystallization of the steel ingots, performed by means of macro- and micrographic and autoradiographic examination as well as by measuring the microhardness of the dendrite axes and interaxial dendrite spaces revealed the following: the addition of 0.10-0.15% Ce improves the macrostructure of steel, markedly reduces its content of sulfur and oxygen, and enhances its ductility and plasticity in the presence of high temperatures, and it also reduces the critical temperature of the

Card 1/2 UDC: 669.85.86:620.178.2:669.141

FOFOVA, N.N.; MOTAL, N.T.; SHUBENKO, G.L.; KURMANOV, M.I., kand. tekhn. nauk, nauchnyy rukovoditel' rabot

Effect of the cerium subgroup of rare-earth elements on the structure and properties of a carbon steel ingot. Sbor.trud. UNIIM no.11:250-261 '65. (MIRA 18:11)

(A) L 13268-66 EWT(m)/EPF(n)-2/EWP(j)/T/EWP(t)/EWP(b)/EWA(c)/ETC(m)
IJP(c) DS/JD/WW/JG/RM

ACC NR: AP6001476 SOURCE CODE: UR/0226/65/000/012/0063/0068

AUTHOR: Fedorov, T. F.; Kuz'ma, Yu. B.; Skolozdra, R. V.; Popova, N. M.

ORG: L'vov State University (L'vovskiy gosuniversitet im. I. Franko); A. A. Baykov Institute of Metallurgy (Institut metallurgii im. A. A. Baykova)

TITLE: Phase equilibria in the ternary systems Zr-Co-C and Nb-Fe-C

SOURCE: Poroshkovaya metallurgiya, no. 12, 1965, 63-68

TOPIC TAGS: phase equilibrium, ternary alloy, zirconium, cobalt, carbon, niobium, iron, X RAY ANALYSIS, TERNARY ALLOY

ABSTRACT: Specimens of the investigated alloys of the Zr-Co-C and Nb-Fe-C systems annealed at 800 and 1050°C, respectively, were examined by means of X-ray and microscopic analyses. The phase equilibria of these systems, as established by phase analysis, are shown in Figs. 1 and 2, respectively. ZrC is in an equilibrium with all the compounds of the Zr-Co system as well as with Co and Zr. For the alloys located in two-phase and three-phase regions the lattice constants of binary compounds do not change, which indicates an insignificant solubility of Co in ZrC and of C in binary compounds of the system Zr-Co. X-ray structural and microscopic analyses of 42 alloys revealed no ternary compounds in the Nb-Fe-C system. NbC at 1050°C is in an equilibrium with the phase $NbFe_2$, the μ-phase, α-Fe and Nb_2C, while the carbide Nb_2C is in

Card 1/4

L 13268-66

ACC NR: AP6001476

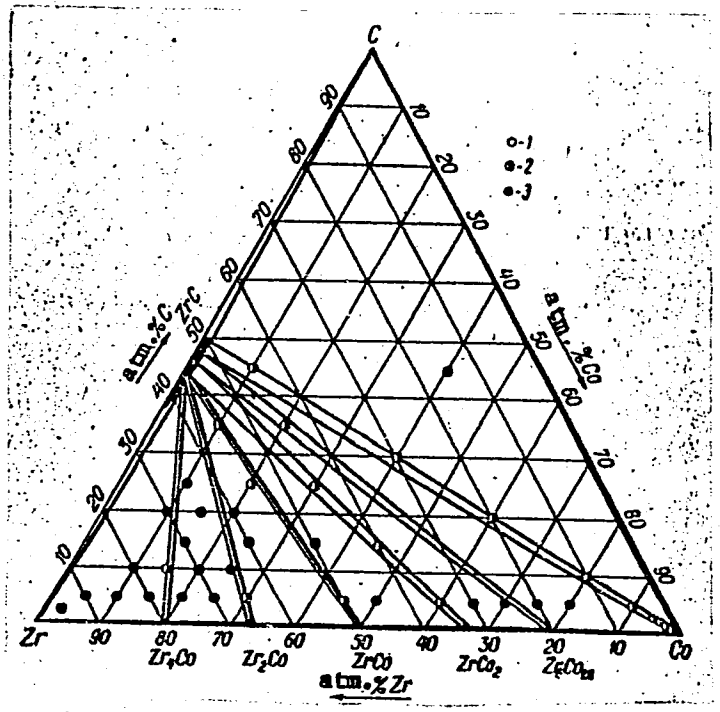


Fig. 1. Phase equilibria in the system Zr--Co-C at 800°C:

1 - single-phase; 2 - two--phase; 3 - three-phase

Card 2/4

L 13268-66
ACC NR: AP6001476

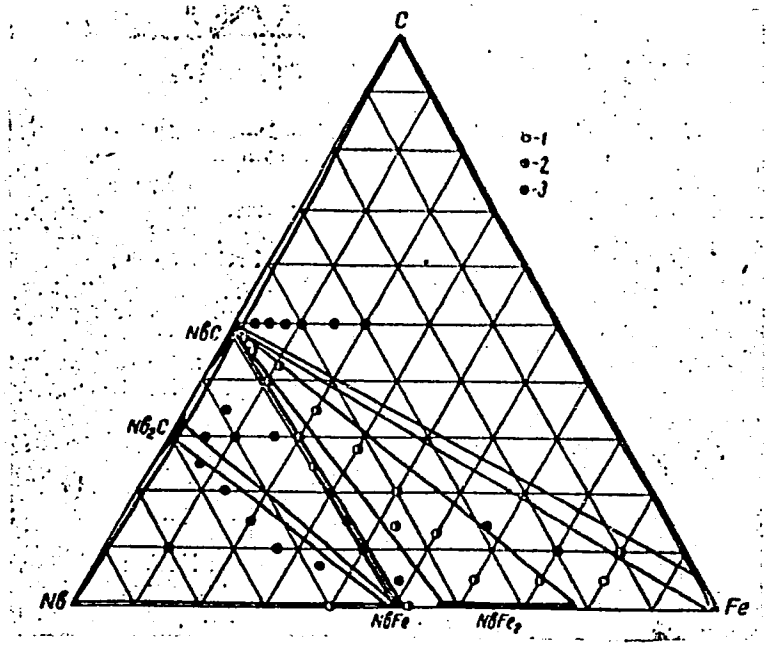


Fig. 2. Phase equilibria in the system Nb-Fe-C at 1050°C

1 - single-phase; 2 - two--phase; 3 - three-phase

Card 3/4

L 13268-66

ACC NR: AP6001476

equilibrium with Nb and μ-phase. No traces of Nb_3C_2 could be discovered. The absence of σ- and η-phases in alloys of the Nb-Fe-C system proves the invalidity of Goldschmidt's (H. Goldschmidt, J. Iron Steel Inst., 194, 2, 159, 1960) phase diagram of the Nb-Fe system. Orig. art. has: 4 figures.

SUB CODE: 11, 20/ SUBM DATE: 29Mar65/ ORIG REF: 007/ OTH REF: 013

Card 4/4

POPOVA, N.M.; [illegible], D.V.; BABENKOVA, L.V.; MAMESHEV, R.

Hydrogenation of cottonseed oil on nickel-kieselguhr and nickel-chromium catalysts over coal in absolute ethyl alcohol. Izv. AN Kazakh. SSR. Ser. khim. nauk 15 no.2:59-64 Ap-Je '65 (MIRA 18:9)

ACC NR: AT7004210 (A) SOURCE CODE: UR/0000/66/000/000/0127/0135

AUTHORS: Fedorov, T. F.; Gladyshevskiy, Ye. I.; Popova, N. M.

ORG: none

TITLE: Investigation of the system niobium-zirconium-hafnium-carbon

SOURCE: AN SSSR. Institut metallurgii. Eksperimental'naya tekhnika i metody vysokotemperaturnykh izmereniy (Experimental techniques and methods of high temperature measurement). Moscow, Izd-vo Nauka, 1966, 127-135

TOPIC TAGS: phase diagram, alloy phase diagram, phase equilibrium, metal phase system, niobium, zirconium, hafnium, carbon

ABSTRACT: The phase relationships in the system Nb-Zr-Hf-C were investigated. This study supplements the results of I. I. Kornilov (Fiziko-khimicheskiye osnovy zharoprochnosti splavov. Izd-vo AN SSSR, 1961, str. 510). Phase diagrams based on x-ray and metallographic data are presented (see Fig. 1). The phase composition of the ternary systems Zr-Nb-C and of the binary system ZrC-HfC, were determined. The results are tabulated. It was found that binary carbide formation did not take place in the ternary system. Similarly, no evidence for the existence of ternary

Card 1/2

ACC NR: AT7004210

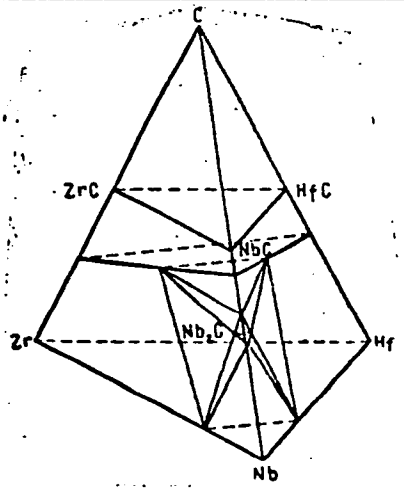


Fig. 1. Phase diagram for the system Zr-Nb-Hf-C at approximately 1700C

carbides was found in the quaternary system. Orig. art. has: 4 tables and 3 graphs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 006

Card 2/2

L 53914-65 EWP(e)/EWT(m)/EWP(i)/EPF(n)-2/EWG(m)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4/Pad/Ps-4/Pi-4/Pu-4 IJP(c) RWH/JD/WW/JG/AT/WH

ACCESSION NR: AP5011828 UR/0192/65/006/002/0313/0314
48.736

AUTHOR: Borusevich, L. K.; Gladyshevskiy, Ye. I.; Fedorov, T. F.; Popova, N. M.

TITLE: New representatives of the structural type W sub 3 Fe sub 3 C

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 2, 1965, 313-314

TOPIC TAGS: carbide structure, tungsten carbide, iron carbide, mixed carbide, Eta phase, niobium carbide, cobalt carbide, tantalum carbide

ABSTRACT: Carbides possessing the structure of η phases exist in many ternary and quaternary systems. In a study of the phase equilibria in the ternary system Nb-Co-C, the authors found that a ternary compound is formed in annealed samples in the vicinity of the composition Nb_3Co_3C. The present article is devoted to a study of the crystal structure of this compound, and of the possible formation of analogous compounds in other systems formed by transition metals with carbon. The compounds Nb_3Co_3C and Ta_3Co_3C were prepared from powdered components (NbC + Co + Nb; TaC + Co + Ta) by pressing, sintering, and remelting. The calculated line intensities were found to be in good agreement with the ob-

Card 1/2

L 53914-65
ACCESSION NR: AP5011828

served intensities, thus indicating that the compounds belong to the type W_3Fe_3C. Analogous compounds of the same structural type were found in the systems Nb-Ni-C and V-Fe-C: Nb_3Ni_3C and V_3Fe_3C. Orig. art. has: 1 table.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko (Lvov State University); Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 05Sep64 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 002 OTHER: 001

Card 2/2

POPOVA, M. N.

The Drop Method of Virus Diagnosis in Plant Husbandry, State Publishing House of Sovkhoz and Kilkhoz Literature, Moscow, 1937, 48 pp. 464.32 D02

So: SIRA-S1-90-53, 15 Dec 1953

IVANOV, A.M.; FALEVICH, B.N.; CHL[illegible]OV, V.A.; IVANOV-DY[illegible], I.G., doktor tekhn. nauk, prof., retsenzent; POPOVA, N.N., red.

[Laboratory work on reinforced concrete elements] Laboratornye raboty po zhelezobetonnym konstruktsiiam. IAroslavl' Rosvuzizdat, 1963. 114 p. (MIRA 17:6)

1. Moskovskiy avtomobil'no-dorozhnyy institut (for Ivanov-Dyatlov).

SAMOYLO, A.I.; POPOVA, N.N., red.

[Industrial buildings of precast elements] Proizvodstvennye zdaniia iz sbornykh elementov. Moskva, Vysshaia shkola, 1965. 215 p. (MIRA 18:3)

POPOVA, M. N.

POPOVA, M. N. "Perserving Precipiti on in th Dired Leaves of Plants Infected by Virus Disesases (Potato)," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1936 Goda, part 3, 1938, pp. 10-12. 423.92 L541

SO: SIRA SI-90-53, 15 December 1953

POPOVA, N. N.

POPOVA, N. N. "Methods for Maintaining the Precipitating Action of the Anti-virus Serum X," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1936 Goda, part 3, 1938, pp. 17-20. 423.92 L5HI

SO: SIRA SI-40-53, 15 December 1953

105. POPOVA, M.N.

"The Drop Method of Agglutination and It's Application in the Diagnostics of Black Bacteriosis of Grain," Doklady Vsesoiuznoi Akademii Sel'skokhoziaistvennykh Nauk imeni V. I. Lenina, vol. 4, no. 14, 1939, pp. 30-33. 20 Akl

So: SIRA SI-90-53, 15 Dec 1953

POPOVA, N. N.

POPOVA, N. N. "Bactericidal Action of Some Chemical and Physical Factors on Bacterium translucens var. undulosum in Grains of Wheat," Doklady Vsesoiuznoi Akademii Sel'skokhoziaistvennykh Nauk imeni V. I. Lenina, vol 4, no. 19, 1939, pp. 16-19 20 Akl

SO: SIRA SI-90-53, 15 December 1953

BABKOV, V.F.; POPOVA, N.N., red.

[Securing traffic safety in designing, constructing and reconstructing highways] Obespechenie bezopasnosti dvizheniia pri proektirovanii, stroitel'stve i rekonstruktsii avtomobil'nykh dorog. Moskva, Vysshaia shkola, 1964. 28 p. (MIRA 18:5)

KAPITANOV, Yuriy Dmitriyevich, dots., kand. tekhn. nauk; MAKEYEV, Valentin Nikolayevich, dots., kand. tekhn. nauk; SAVEL'YEV, Petr Petrovich, dots., kand. ekon. nauk; VARENIK, Yevgeniy Ivanovich, prof., doktor tekhn. nauk; CHERNOV, T.P., prof., retsenzent; ZOLOTNITSKIY, N.D., prof., doktor tekhn. nauk, retsenzent; POPOVA, N.N., red.

[Technology of the construction industry] Tekhnologiia stroitel'nogo proizvodstva. Moskva, Vysshaia shkola, 1965. 586 p. (MIRA 18:7)

1. Zaveduyushchiy kafedroy tekhnologii stroitel'nogo proizvodstva Moskovskogo inzhenerno-stroitel'nogo instituta im. V.V.Kuybysheva (for Chernov).

POPOVA, N.N.; SANDLER, N.I.; BUTKO, N.I.

Effect of rare-earth metals of the cerium subgroup on the cold-brittleness threshold of carbon steel. Metalloved. i term. obr. met. no.11:21-22 N '65. (MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

POPOVA, N.M.; BUTKO, N.I.; SHOBENKO, G.I.

Microscopic determination of cerium sulfide inclusions. Zav.lab. 31 no.3:327-330 '65. (MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

POPOVA, N.N.

Study on the effect of physical and chemical agents on organospecific antigens of the brain tissue. Biul. eksp. biol. i med. 60 no.9:80-84 S '65. (MIRA 18:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut sudebnoy psikhiatrii imeni Serbskogo (dir. - dotsent G.V. Morozov).

DYUBIN, N.P.; DYUBINA, A.V.; SVIRIDENKO, F.F.; KARPUNIN, A.M.; Prinimali uchastiye: LEVCHENKO, N.D.; POPOVA, N.N.; TROFIMOV, V.V.; SHUBENKO, G.L.; CHETVERIKOV, A.V.; RYABININ, N.G.; ZEMLYANSKAYA, L.I.; FRADINA, M.G.; ORGIYAN, V.S.; SABUTSKIY, F.M.; MOMGELI, A.V.; BUL'SKIY, M.T.; FRADIN, M.D.; VALENKO, N.S.; KUCHERYAVYY, Yu.P.; CHEPELEV, P.M.; SABUROV, T.A.; POLYAKOV, P.M.; MALASHENKO, R.B.

Effect of the temperature of rail rolling on their quality. Sbor. trud. UNIIM no.11:344-353 '65. (MIRA 18:11)

KUZNETSOVA, N.I.; POPOVA, N.N.

Effect of anticerebral antibodies in the serum of patients with neuropsychic diseases on water-salt extracts of the brain subjected to physicochemical treatment. Biul eksp. biol. i med. 60 no. 10:77-80 O '65 (MIRA 19:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut sudebnoy psikhiatrii imeni Serbskogo (direktor - dotsent G.V. Morozov), Moskva.
Submitted April 24, 1964.

KUZNETSOVA, N.I.; POPOVA, N.N.

Study of the conditions for detecting antibrain antibodies in the blood serum of patients with neuropsychic diseases. Probl. sud. psikh. no.13:19-29 '62. (MIRA 18:9)

NECHELYUSTOV, N.V.; POPOVA, N.N.; MINTSER, E.F.; BELEVITIN, V.V.; RAZINA, I.S.

Selenium and tellurium in leand-zinc deposits of the Altyn-Topkan ore zone. Trudy IMGRE no.10:125-135 '63. (MIRA 17:5)

POPOVA, N. N.

Singular formations of hydrothermal gypsum and graphite in the ores of the Cherdoyak deposit. Zap. Vses. min. ob-va 91 no.3: 353-355 '62. (MIRA 15:10)

(Narym Range—Gypsum)
(Narym Range—Graphite)

KUZNETSOVA, N.I.; POPOVA, N.N.

Study of the organ specific antigenic properties of the human brain using sera containing isoimmune antibodies to the brain. Biul.eksp.biol.i med. 54 no.7:62-68 Jl '62. (MIRA 15:11)

1. Iz TSentral'nogo nauchno-issledovatel'skogo instituta sudebnoy psikhiatrii imeni prof. Serbskogo (dir. G.V.Morozov). Predstavlena deystvitel'nym chlenom AMN SSSR N.N.Zhukovym-Verezhnilovym.
(BRAIN)(SERUM) (ANTIGENS AND ANTIBODIES)

POPOVA, N.N.

Effect of the digging activity of small mammals on the distribution of soil moisture in areas covered in mixed conifer and hardwood forest. Biul.MOIP.Otd.biol. 67 no.5:29-35 S-O '62.
(MIRA 15:10)

(KUNTSEVO DISTRICT--FOREST FAUNA)
(SOIL MOISTURE)

POPOVA, N.N., inzh.; KASHNIKOVA, M.L., inzh.

Structural stability and properties of 1Kh12V2MF, 1Kh12VNMF, and Kh11LB steels. Metalloved. i term. obr. met. no.10:63-64 O '62. (MIRA 15:10)

(Chromium steel—Metallography)
(Metals at high tempetature)

S/129/62/000/010/006/006
E073/E383

AUTHORS: Popova, N.N. and Kashnikova, M.L., Engineers

TITLE: Stability of the structure and properties of steels 1Х12В2МФ (1Kh12V2MF), 1Х12В2НМФ (1Kh12VNMF) and Х11Л5 (Kh11LB)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 10, 1962, 63 - 64 + 1 plate

TEXT: The effect of elevated temperatures on the mechanical properties, microstructure and distribution of the alloying elements between the carbide phase and the solid solution was investigated for specimens cut from experimental forgings of discs, rotors and cylinder castings of the following steels (%):

	C	Si	Mn	Cr	Mo	W	V	Ni	S	P
1Kh12V2MF	0.16	0.37	0.75	12.16	0.70	1.95	0.33	0.25	0.015	0.01
1Kh12VNMF	0.18	0.35	0.55	13.0	0.54	1.00	0.30	0.79	0.016	0.02
Kh11LB	0.13	0.26	0.56	11.65	0.61	1.07	0.28	0.78	0.014	0.02.

The heat-treatment was as follows: normalizing at 1 050 - 1 070 °C, oil-quenching from 1 020 - 1 050 °C, followed by tempering at 660 - 680 °C and furnace cooling for the steel 1Kh12V2MF;

Card 1/3

Stability of the structure ....

annealing at 960 °C, oil-quenching from 1 000 °C, tempering at 680 °C and furnace cooling for the steel 1Kh12VNMF; normalizing at 1 150 °C, tempering at 700 °C, furnace cooling to 150 °C, or normalizing at 1 050 °C, tempering at 680 °C and furnace cooling to 300 °C for the steel Kh11LB. Prolonged holding of the steels 1Kh12VNMF and Kh11LB at 580 - 600 °C did not produce any appreciable change in the strength, ductility and impact strength at room temperature. The impact strength of steel 1Kh12V2MF after 5 000 hours at 575 or 600 °C was considerably reduced.
Abstracter's note: no data given.] The microhardness of all the three steels was the same in the initial state and after prolonged holdingat elevated temperatures. Initially, the structure was sorbite, oriented along the crystallographic planes and 10-25% free ferrite. It contained only the carbide $M_{23}C_6$ in the initial state but, after holding at the elevated temperatures, additional lines corresponding to the intermetallide of the Fe_2Mo type were observed in the X-ray patterns. Immediately after the heat-treatment, practically all the V and a large proportion of the Cr and Mo were present as carbides, the

Stability of the structure ....

remainder of the alloying additions being in the solid solution. After prolonged holding at elevated temperatures the W and Mo content of the carbide phase increased, and that of Fe and Ni decreased. It was concluded that steels 1Kh12VNMF and Kh11Lb retained their high strength and ductility after prolonged service of 580 - 600 °C, owing to (a) the presence of the $Cr_{23}C_6$ carbide stable at elevated temperatures and (b) strengthening of the solid-solution matrix by the alloying elements. There is 1 table.

Card 3/3

KUZNETSOVA, Nina I.; POPOVA, Natalia,N.

Conditions of detection of antibrain antibodies in the serum of patients with neuropsychiatric diseases using a complement fixation test. Folia biol. (Praha) 10 no.2:98-107 '64

1. Serbsky Central Research Institute of Forensic Psychiatry, Moscow.

ACCESSION NR: AT4028288 S/2677/63/000/010/0125/0135

AUTHOR: Nachelyustov, N. V.; Popova, N. N.; Mintser, E. F.; Belevitin, V. V.; Razina, I. S.

TITLE: Selenium and tellurium in lead-zinc deposits of the Alty*n-Topkan ore field

SOURCE: AN SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Trudy*, No. 10, 1963. Redkiye elementy* v sul'fidny*kh mestorozhdeniyakh (rare earth elements in sulfide deposits) 125-135

TOPIC TAGS: selenium, tellurium, galenite, lead-zinc deposits, skarn, sphalerite, pyrite, chalcopyrite, sulfide, effusion

ABSTRACT: Certain regularities in the distribution of selenium and tellurium in the deposits of the Alty*n-Topkan ore fields in the Karamaza area of the USSR, as well as probable conditions and the method of entry of these elements into the crystal lattice of galenite are examined. The authors describe the types of minerals and composition of the separate ore fields in that area. The selenium and tellurium content of sulfides of the various fields are listed in tables. The primary minerals of the various ore fields are galenite, pyrite, chalcopyrite, sphalerite. Samples used in the tests were taken from six different ore fields in

Card 1/2

ACCESSION NR: AT4028288

the area. The selenium and tellurium distribution in galenite in the various fields are listed in graphs. The authors also describe the influence of impurities on the distribution of selenium and tellurium as well as the influence of the depth of formation of their distribution. In the high temperature stage of the process of ore formation, selenium and tellurium accumulated toward the end of the stage and were fundamentally concentrated in galenite. The selenium and tellurium content and the Se:Te ratio in galenite differs sharply in specific samples of the same deposit and corresponds to a known degree to the content and ratio of these elements in other sulfides of the same samples and in the deposit as a whole. Some influence of a number of cations of the admixture elements (bismuth and silver, to a lesser degree antimony and thallium) in galenite is noted, which seems to facilitate the isomorphic entrance into its lattice of the anions, selenium and tellurium. The authors point out the undoubtedly practical value of selenium and tellurium in galenite of the skarn-ore deposits of the Alty*n-Topkan ore fields. Orig. art. has: 4 figures and 5 tables.

ASSOCIATION: Institut minerologii, geokhimii i kristallokhimii redkikh elementov, AN SSSR (Institute of Mineralogy, Geochemistry and the Chemistry of Crystals)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ML, EL NO REF SOV: 007 OTHER: 000

Card 2/2

KOCHERGIN, V.P.; POPOVA, N.N.

Effect of halide ions on iron corrosion in fused electrolytes. Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.3:397-403 '61. (MIRA 14:10)

1. Ural'skiy gosudarstvennyy universitet imeni Gor'kogo, kafedra neorganicheskoy khimii.

(Halides)
(Iron--Corrosion)

18.8300 2808, 4016, 1530

27391
S/153/61/004/003/001/008
E071/E435

AUTHORS: Kochergin, V.P. and Popova, N.N.

TITLE: The influence of halogen ions on the corrosion of iron in molten electrolytes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, Vol.4, No.3, 1961, pp.397-403

TEXT: In view of the lack of published data on the influence of halogen ions on the corrosion of metals in molten electrolytes at high temperatures, the authors carried out the determination of the mean velocity of the corrosion of iron in melts of: $MgCl_2$ - NaH, $ZnCl_2$ - NaH, $ZnSO_4$ - NaH, Na_2CO_3 - NaH, where H = F^-, Cl^-, Br^- and I^-. Chemically pure NaF, NaCl, NaBr, NaI, $MgCl_2 \cdot 6H_2O$, $NaNO_3$, $ZnCl_2 \cdot 1.5H_2O$, $ZnSO_4 \cdot 5H_2O$ and $NaCO_3$ were used for the preparation of melts. Melts containing sodium bromide or iodide were prepared in a carbon dioxide atmosphere. $MgCl_26H_2O$ was dehydrated with dry hydrogen chloride or ammonium chloride. The velocity of corrosion of iron was determined by the previously described method (Ref.11: Zh. prikl. khimii, 27, 945, (1954)) at 500°C on at least 3 specimens of armco iron in the form

Card 1/4

The influence of halogen ions ...

of polished plates. It was found that the velocity of corrosion of iron in melts decreases in the following order: $MgCl_2$ - NaCl, $MgCl_2$ - NaBr, $MgCl_2$ - NaI as well as in $ZnCl_2$ - NaCl, $ZnCl_2$ - NaBr, $ZnCl_2$ - NaI, $ZnCl_2$ - NaF. A similar phenomenon takes place in the series of melts $ZnSO_4$ - NaF, $ZnSO_4$ - NaCl, $ZnSO_4$ - NaBr and $ZnSO_4$ - NaI. The process of corrosion of iron in melts $ZnSO_4$ - NaH is more complex than in the abovementioned electrolytes. Chemical and X-ray analysis of the corrosion products indicated that two parallel reactions are taking place.

$$Fe + 2H^+ \Longrightarrow H_2 + Fe^{2+} \qquad (1)$$

$$3Fe + ZnSO_4 \Longrightarrow Fe_3O_4 + ZnS \qquad (2)$$

Reaction (2) takes place at a high content of zinc sulphate and reaction (1) at a low one. After a vacuo treatment of the melt at 500°C for 3 hours, which removed compounds containing hydrogen ions, the corrosion of iron took place only by reaction (2). The influence of halogen ions on the decrease in the velocity of corrosion in the above series is explained by the formation of complex ions more resistant to hydrolysis (i.e. to the formation of

The influence of halogen ions ...

hydrogen ions) or in the case of $ZnSO_4$ (reaction (2)) due to a decrease in the oxidizing activity of SO_4^{2-} ions with increasing strength in complex ions. Other conditions remaining equal, the velocity of the corrosion of iron in melts $NaNO_3$ - NaH decreases in the following order: $NaNO_3$ - NaF, $NaNO_3$ - NaCl, $NaNO_3$ - NaBr and $NaNO_3$ - NaI. With an increasing proportion of sodium halogenide in molten sodium nitrate (up to 10 to 15 mole %) the velocity of corrosion increases; on further addition, it decreases. A similar phenomenon was observed on the corrosion of iron in molten sodium carbonate in the presence of sodium halogenides at 800°C, but in this case the velocity of corrosion decreases in the following order: Na_2CO_3 - NaI, Na_2CO_3 - NaBr, Na_2CO_3 - NaCl and Na_2CO_3 - NaF. The work of G.V.Akimov, N.D.Tomashov, V.N.Modestova, B.N.Kabanov, L.Vanyukova, A.Stromberg and T.Chukina is mentioned. There are 5 figures and 25 references: 22 Soviet and 3 non-Soviet. The three references to English language publications read as follows:
Ref.3: G.W.Mellor, M.Cohen, A.Beck. J. Electrochem. Soc., 105, 332 (1958); Ref.17: C.Gill, M.Straumanic. J.Electrochem. Soc.,
Card 3/4

The influence of halogen ions ...

102, 42 (1956); Ref.24: P.Gloyd, E.Chamberlain. J.Iron and Steel Inst., 142, 141 (1940). R.Box, B.Middleton. J.Iron and Steel Inst., 151, 71 (1945).

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo Kafedra neorganicheskoy khimii (Ural State University imeni A.M.Gor'kiy, Department of Inorganic Chemistry)

SUBMITTED: August 27, 1959

Card 4/4

POPOVA, N.N., dotsent

Dynamics of changes in cholesterol, lecithin, and lecithin-cholesterol coefficient in atherosclerosis of the vessels of the brain. Vrach. delo no.2:15-18 F '61. (MIRA 14:3)

1. Kafedra nervnykh bolezney (zav. - zasluzhennyy deyatel' nauki, prof. N.V.Mirtovskiy) L'vovskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (BRAIN--BLOOD SUPPLY)
(CHOLESTEROL METABOLISM) (LECITHIN)

POPOVA, N. N.

PHASE I BOOK EXPLOITATION SOV/5521

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Metallovedeniye i termicheskaya obrabotka (Physical Metallurgy and Heat Treatment of Metals) Moscow, Mashgiz, 1961. 330 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov UkrSSR. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Editorial Board: M. P. Braun, Doctor of Technical Science, I. Ya. Dekhtyar, Doctor of Technical Sciences, D. A. Dravgor, Doctor of Technical Sciences, I. S. Kamenetskiyye, Engineer, Yu. A. Markovskiy, Candidate of Technical Sciences, V. S. Pomyakov, Doctor of Technical Sciences, and A. V. Chernovol, Candidate of Technical Sciences; Ed.: M. S. Gorelik; Tech. Ed.: M. S. Gorelik; Ed. of Publishing House: V. K. Serdyuk, Engineer.

Card 1/10

PURPOSE: This collection of articles is intended for scientific workers and technical personnel of research institutes, plants, and schools of higher technical education.

COVERAGE: The collection contains papers presented at a convention held in Kiyev on problems of physical metallurgy and methods of the heat treatment of metals applied in the machine industry. Phase transformations in metals and alloys are discussed, and results of investigations conducted to ascertain the effect of heat treatment on the quality of metal are analyzed. The possibility of obtaining metals with given mechanical properties is discussed, as are problems of steel brittleness. The collection includes papers dealing with kinetics of transformation, heat treatment, and properties of cast iron. No personalities are mentioned. Articles are accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

Card 3/10

POPOVA, N.N.; MALYSHENKO, V.A.

Apparatus for the direct electrolytic polishing and etching of microsections on parts. Zav.lab. 26 no.3:367-368 '60. (MIRA 13:6)

(Electrolytic polishing) (Steel--Metallography)

POPOVA, N.N.

Device for the "fractographic" examination of fractures in metals.
Zav.lab. 25 no.2:230 '59. (MIRA 12:3)

1. Khar'kovskiy turbinnyy zavod.
(Metallography--Equipment and supplies)

7(6),18(7) SOV/32-25-2-53/78

AUTHOR: Popova, N. N.

TITLE: A Device for the Fractographic Examination of Metal Fractures (Prisposobleniye dlya fraktograficheskogo issledovaniya izlomov metallov)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, p 230 (USSR)

ABSTRACT: A device has been designed which reproduces a clear image of the structure of fractures while protecting the lenses of the metallographic microscope. The device described (Fig 1) is mounted on the stage of the metallographic microscope in such a way as to make the cut-out section of the device coincide with the ocular axis of the microscope. The device consists, basically, of a tripod with a hinge-type clamp as is to be found in the tripod of the FED camera. The fracture may thus be adjusted to the angle desired by means of the ball-and-socket joint. A fractogram (Fig 2) of a stainless steel sample is added by way of illustration. There are 2 figures.

ASSOCIATION: Khar'kovskiy turbinnyy zavod (Khar'kov Turbine Plant)

Card 1/1

SEMENOV, S.F.; MOROZOV, G.V., SEMENOVA, K.A.; KUZNETSOVA, N.I., POPOVA, N.N.; GLEBOV, V.S.

Clinical evaluation of the course of schizophrenia and other neuropsychic diseases in patients with specific antibrain antibodies in the blood. Probl. sud. psikh. no.13:5-18 '62. (MIRA 18:9)

BUTT, Yu.M., prof.; OKOROKOV, S.D.; SYCHEV, M.M.; TIMASHEV, V.V.; POPOVA, N.N., red.

[Technology of binding materials] Tekhnologiia viazhushchikh veshchestv. Moskva, Vysshaia shkola, 1965. 619 p. (MIRA 18:10)

SOV/124-58-4-4882

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 167 (USSR)

AUTHORS: Seleznev, A. G., Kaplan, R. S., Popova, N. N.

TITLE: Strength of 1Kh13 Steel at Elevated Temperatures (Prochnost' stali 1Kh13 pri povyshennykh temperaturakh)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1957, Vol 11, Nr 2, pp 45-53

ABSTRACT: It follows from the experiments that 1Kh13 steel exhibits stability of its properties when heated up to 550°C. At this temperature its properties remain stable for as long as 5000 hours. Under conditions of long-term loading at temperatures of up to 550°C the steel exhibits high plastic properties and is unaffected by temper brittleness. Presence of notches does not result in embrittlement of 1Kh13 steel.

From the résumé

1. Steel--Mechanical properties 2. Steel--Temperature factors
3. Steel--Test results

Card 1/1

SOV/137-58-9-20281

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 309 (USSR)

AUTHORS: Fridman, I.D., Kuznetsova, L.N., Popova, N.N.

TITLE: Utilization of Radioactive Isotopes in Assaying (Primeneniye radioaktivnykh izotopov v probirnom analize)

PERIODICAL: Tr. N.-i. gornorazved. in-ta "Nigrizoloto", 1957, Nr 23, pp 112-115

ABSTRACT: Preliminary experiments with the utilization of the radioactive isotope of Au were carried out for the determination of losses in slags during the smelting of the tailings of the cyanidation of Au ores. An initial $KAu(CN)_2$ solution of specified concentration was prepared. Weighed test samples of pure quartz were placed in porcelain cups and covered with the solution with which a measured amount of Au was introduced for every experiment. The test samples were dried on a water bath, mixed with fluxes, and melted. The results of the fluxing were determined by the (Au) in the slags by the method of measuring the activity in impulses without recalculating into mg. The results of the experiments conducted have shown that the lowest losses of Au in slags occur in the case of fluxing

Card 1/2

137-58-2-4164

Popova, N.N.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 271 (USSR)

AUTHORS: Seleznev, A.G., Kaplan, R.S., Popova, N.N.

TITLE: The High-temperature Strength of Steel 1Kh13 (Prochnost' stali 1Kh13 pri povyshennykh temperaturakh)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1957, Vol 11, pp 45-53

ABSTRACT: A study was made of two heats of steel 1Kh13 and one heat of steel 2Kh13 after both had been normally heat-treated. The σ_b, σ_s, δ, ψ, and a_k values were determined at temperatures ranging from 20 to 550°C, and the influence of the deformation rate on changes in the mechanical properties was investigated. It was found that steels 1Kh13 and 2Kh13 are not sensitive to tempering brittleness. Within the 300-350° temperature range a determination was made of the long-term rupture strength over periods of 1,000-100,000 hours, of the creep limit over periods of 10,000 and 100,000 hours, and of the stresses producing a 1 percent deformation. The long-term rupture strength for a >6,000-100,000 hour life was obtained by extrapolation from the long-term strength curves. To investigate the stability

Card 1/2

137-58-2-4164

The High-temperature Strength of Steel 1Kh13

of the structure and properties, the mechanical properties of the steels were determined at room temperature after a prolonged heating (up to 5,000 hours) at 470 and 530°, with subsequent cooling in air. Steel 1Kh13 was found to have stable properties when heated for long periods (up to 5,000 hours) at temperatures up to 550°. When stressed for long periods at these same temperatures it exhibited eminently plastic properties. Its strength was not impaired by notching; the long-term strength of the notched bars exceeded by 50 percent that of the smooth bars.

1. Steel--Tensile properties 2. Steel--Temperature effects 3. Steel--Deformation

T.F.

Card 2/2

POPOVA, N.N.; KRAVCHENKO, N.A.

Methods of testing the tendency of cast iron for growth.
Zav.lab. 23 no.7:817-818 '57. (MLRA 10:8)

1.Khar'kovskiy turbinnyy zavod im. S.M. Kirova.
(Cast iron--Metallography)
(Metals, Effect of temperature on)

POPOVA, N.N., kand.med.nauk

Early symptoms of cerebral atherosclerosis. Vrach.delo no.10:1023-1025 O '57. (MIRA 10:12)

1. Kafedra nervnykh bolezney (zav. - zasl. deyatel' nauki, prof. N.V.Mirtovskiy) L'vovskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (BRAIN--BLOOD SUPPLY)

POPOVA, N.N., inzhener; KRAVCHENKO, N.A., inzhener.

Most favorable temperature range for forging and heat treating of large shafts made of 9-2 aluminum-manganese bronze. Metalloved.i obr.met. no.7:28-33 Jl '57. (MLRA 10:8)

1.Khar'kovskiy turbinyy zavod.
(Aluminum bronze--Metallurgy)

Popova, N.N.

32-7-17/49

AUTHOR: Popova, N.N., Kravchenko, N.A.

TITLE: The Method of Investigating the Inclination of Cast Iron to Increase its Volume
(Metodika ispytaniya sklonnosti chuguna k rostu)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 7, pp. 817 - 818 (USSR)

ABSTRACT: One of the most important advantages offered by cast iron productions is their low expansion in the case of an increase of temperature. A device for the investigation of this property was constructed. In the case of a repeated heating of 16 hours and cooling during 8 hours the longitudinal modification of cast iron was determined. As a preparation a SCh - 36 cast iron sample with a ▽▽▽7-surface of 15 mm diameter and 100 mm length was used. Each recording of weight and of length was carried out on two preparations. By thermal treatment a comparison of microstructure was carried out. In order to avoid oxidation of ground surfaces, these were washed with a 4 % HNO_3 spirit solution in a special reagent (nitrogen-acid sodium, 3 g calcined soda). There is 1 figure and 1 table.

Card 1/2

AUTHORS: Popova, N. N. and Kravchenko, N. A., Engineers.

129-7-7/16

TITLE: Optimum temperature range for forging and heat treatment conditions for large shafts made of the Al-Mn bronze, Бр.АМц 9-2. (Optimal'nyy temperaturnyy interval kovki i reznim termicheskoy obrabotki krupnykh valov iz Br.AMts 9-2).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.7, pp.28-33 (U.S.S.R.)

ABSTRACT: Owing to its anti-corrosive properties this material is used for components designed for operation in sea and fresh water, oil and liquid fuel. This bronze is strong, ductile and can be satisfactorily worked by pressure in the cold as well as in the hot state. Literary data relating to forging and heat treatment conditions of large size components made of such bronze are scarce and contradictory. Whilst Smiryagin, A.P. (1) recommends forging in the temperature range of 850 to 800 C, Gubkin, S.I. (2) recommends forging at 900-750 C and according to the data of the Ural Works (3) the temperature at the end of the forging process should not drop below 980 C. In this paper experimental data are given relating to the choice of the optimum regime of forging

Card 1/4

Optimum temperature range for forging and heat treatment conditions of large shafts made of the Al-Mn bronze, Бр. АМц 9-2. (Cont.) 129-7-7/16

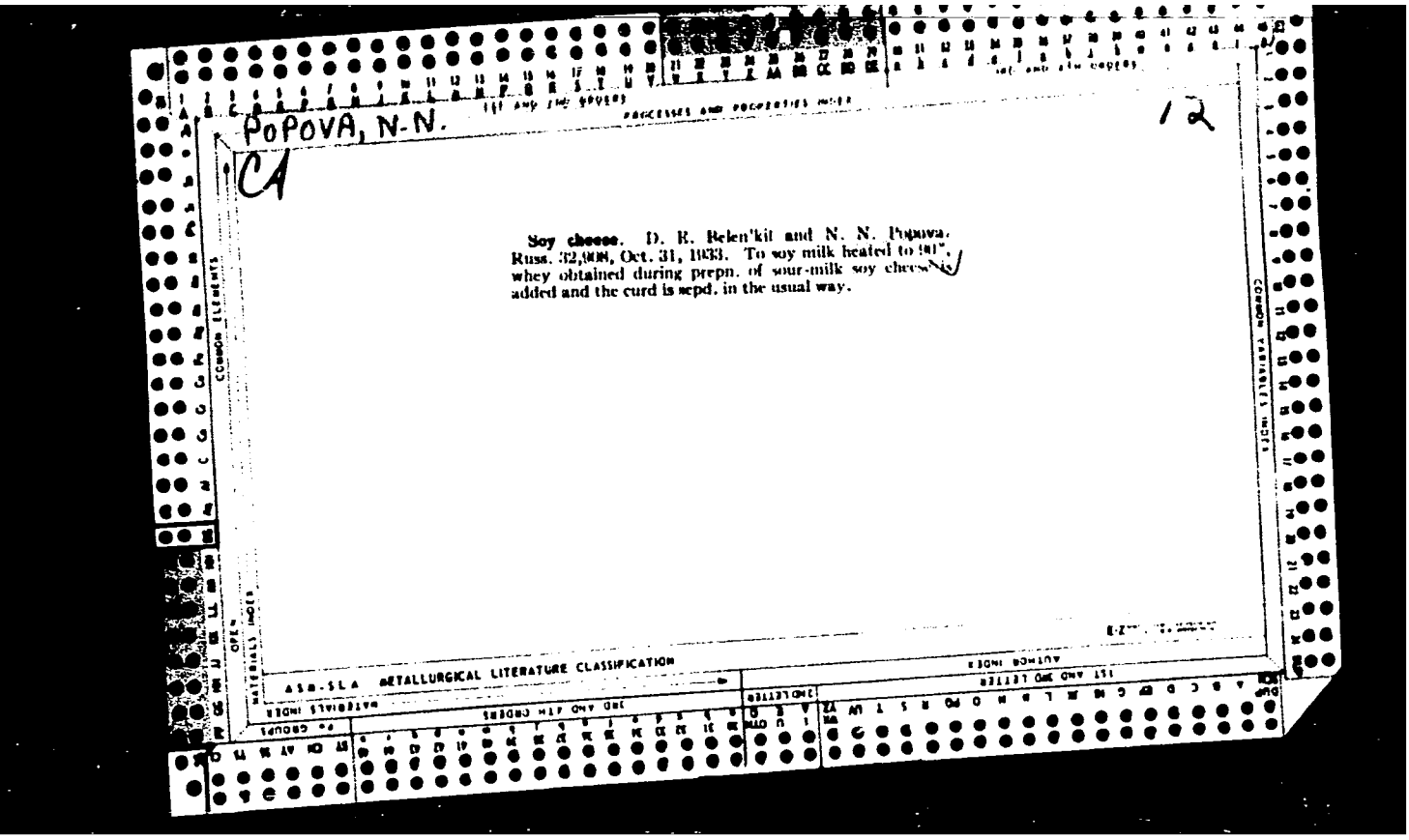
metal, a defect free forging can be obtained in spite of transcrystallisation phenomena if the required temperature regime is adhered to. The presence of spots where the transcrystallisation penetrates to the surface owing to the high depth of the rough machining can lead to crack formation during forging and, therefore, the machining should be effected only to a maximum depth which is necessary for eliminating surface defects. The optimum temperature range for forging is 900 to 800 C. The strength properties of the investigated bronze are attributed to the aluminium content; the properties satisfying technical requirements could be ensured by maintaining the aluminium content at its upper limit. For removing internal stresses it is recommended to temper as follows: place the casting into a furnace heated to 200 C, heat to 380 C with a speed of 80 C/hr holding at 380 for four hours, cooling in the furnace to 200 C with a speed of 20 C/hr and then cooling in air. If such heat treatment does not ensure the desired mechanical properties, then it is necessary to first harden (prior to

Card 3/4

KRAVCHENKO, N.A.; POPOVA, N.N.

Detection of residual stresses in brass tubes by the ammonia test. Zav.lab. 22 no.6:694-695 '56. (MLRA 9:8)

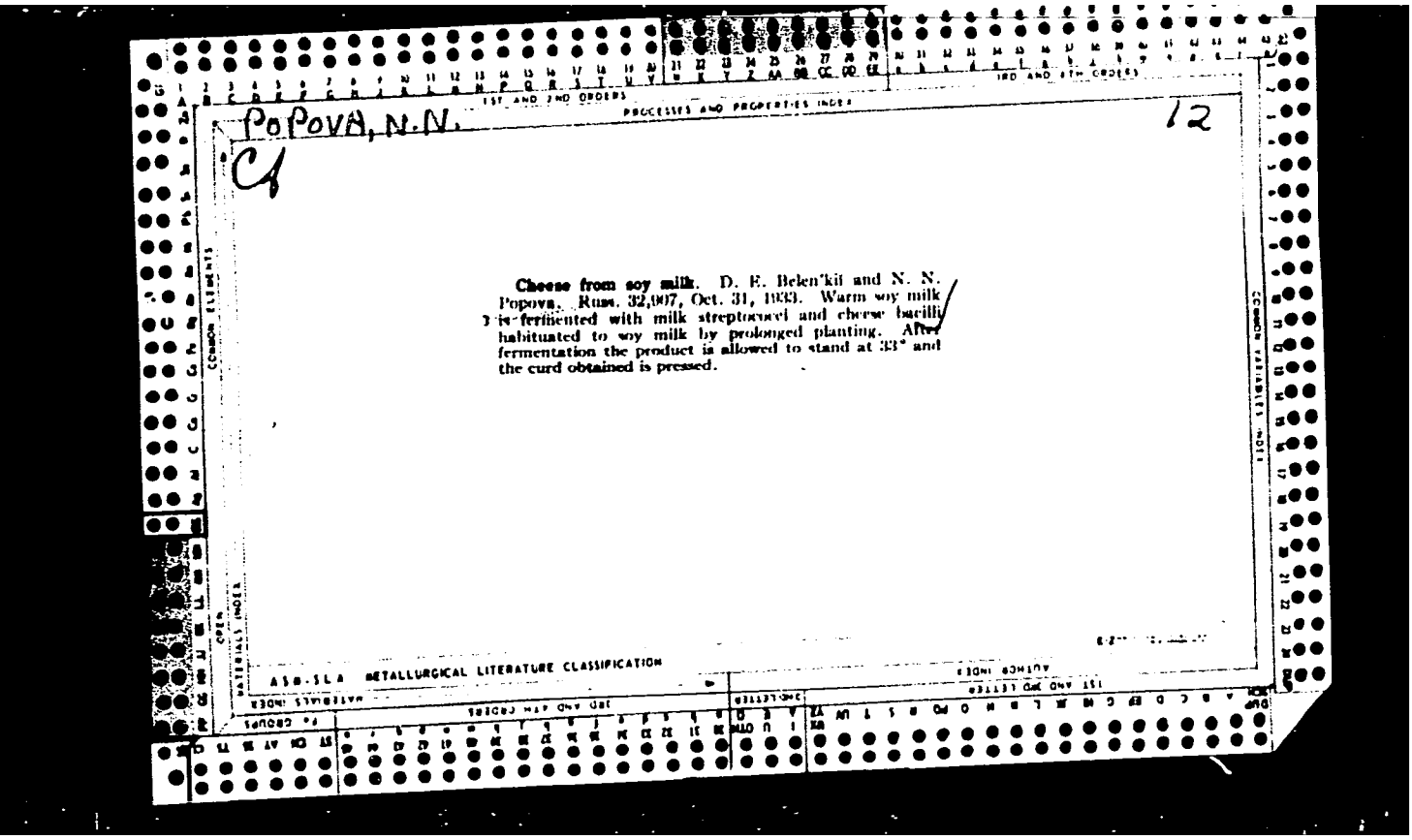
1. Kharkovskiy turbinnyy zavod imeni S.M. Kirova.
(Brass--Testing) (Ammonia)


POPOVA, N.N.

CA

12

Soy cheese. D. R. Belen'kii and N. N. Popova. Russ. 32,808, Oct. 31, 1933. To soy milk heated to 80°, whey obtained during prepn. of sour-milk soy cheese is added and the curd is sepd. in the usual way.



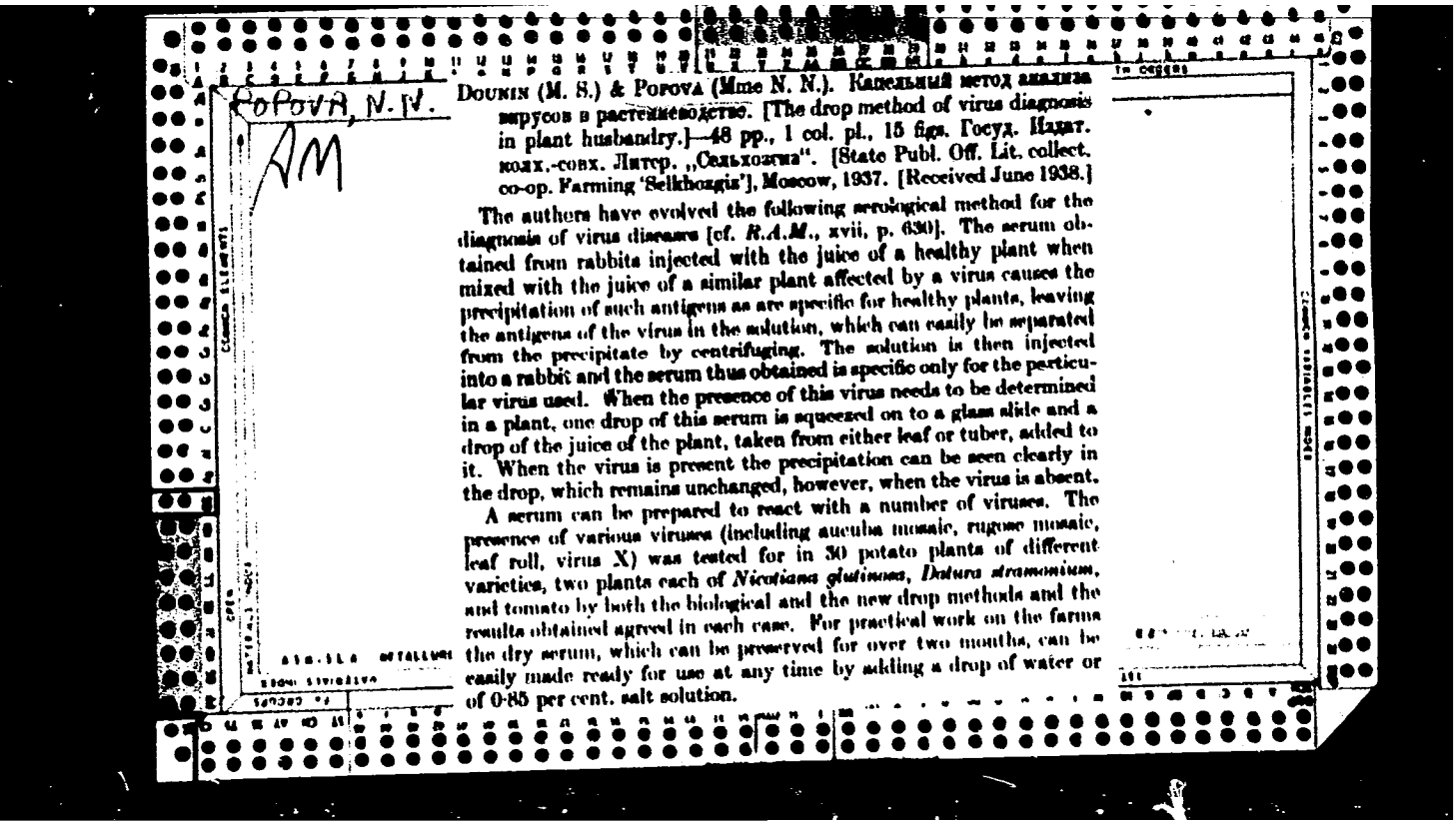
POPOVA, N.N.

12

C1

Cheese from soy milk. D. E. Belen'kii and N. N. Popova. Russ. 32,907, Oct. 31, 1933. Warm soy milk is fermented with milk streptococci and cheese bacilli habituated to soy milk by prolonged planting. After fermentation the product is allowed to stand at 33° and the curd obtained is pressed.

A 58-5 LA METALLURGICAL LITERATURE CLASSIFICATION



Popova, N. V.

AM

Dounin (M. S.) & Popova (Mme N. N.). Капельный метод анализа вирусов в растениеводстве. [The drop method of virus diagnosis in plant husbandry.]—48 pp., 1 col. pl., 15 figs. Госуд. Изд-во кнж.-журн. Литер. „Сельхозгиз". [State Publ. Off. Lit. collect. co-op. Farming 'Selkhozgiz'], Moscow, 1937. [Received June 1938.]

The authors have evolved the following serological method for the diagnosis of virus diseases [cf. *R.A.M.*, xvii, p. 630]. The serum obtained from rabbits injected with the juice of a healthy plant when mixed with the juice of a similar plant affected by a virus causes the precipitation of such antigens as are specific for healthy plants, leaving the antigens of the virus in the solution, which can easily be separated from the precipitate by centrifuging. The solution is then injected into a rabbit and the serum thus obtained is specific only for the particular virus used. When the presence of this virus needs to be determined in a plant, one drop of this serum is squeezed on to a glass slide and a drop of the juice of the plant, taken from either leaf or tuber, added to it. When the virus is present the precipitation can be seen clearly in the drop, which remains unchanged, however, when the virus is absent.

A serum can be prepared to react with a number of viruses. The presence of various viruses (including aucuba mosaic, rugose mosaic, leaf roll, virus X) was tested for in 30 potato plants of different varieties, two plants each of *Nicotiana glutinosa*, *Datura stramonium*, and tomato by both the biological and the new drop methods and the results obtained agreed in each case. For practical work on the farms the dry serum, which can be preserved for over two months, can be easily made ready for use at any time by adding a drop of water or of 0·85 per cent. salt solution.

KRUSHINSKIY, L.V.; MOLODKINA, L.N.; POPOVA, N.P.

Interrelation between extrapolation and conditioned reflexes in birds. Ornitologiia no.6:408-417 '63. (MIRA 17:6)

OTTO, D.D.; PONOMAREV, V.D.; NURMAGAMBETOV, Kh.N.; POTOVA, N.I.

Desilicon izing through hydrogarnets of strong and ultra-strong [illegible] ratio aluminate solutions. Trudy Inst.met.i obog. AN Kazakh. SSR 11:44-53 '64. (MIRA 18:4)

ACCESSION NR: AP4037592 S/0056/64/046/005/1782/1786

AUTHORS: Bukat, G. M.; Popov, N. P.

TITLE: Capture of muons by the B-10 nucleus

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1782-1786

TOPIC TAGS: boron, muon, muon capture, correlation technique, hyperfine structure, mesic atom, self similarity model

ABSTRACT: Approximate equations are derived for nonstationary waves of finite amplitude in a rarefied plasma in the case of characteristic frequencies much smaller than the Larmor frequency, so that deviations from quasi-neutrality can be neglected. A class of one-dimensional solutions is obtained, which are self-similar with respect to some of the variable. These describe the propagation of waves with finite (but small) amplitude both parallel, transverse, and inclined to the magnetic field (but at a small angle), at a suf-

Card 1/2

ACCESSION NR: AP4037592

ficiently large distance from a source which is active for a limited time interval. "The authors are grateful to R. Z. Sagdeyev for continuous interest in the work and for useful discussions, and also to G. I. Guseva for help with the calculations." Orig. art. has: 3 figures and 57 formulas.

ASSOCIATION: Novosibirskiy gosudarstvenny*y universitet (Novosibirsk State University)

SUBMITTED: 18Nov63	DATE ACQ: 09Jun64	ENCL: 00
SUB CODE: NP	NR REF SOV: 004	OTHER: 004

Card 2/2

ACCESSION NR: AP4037599 S/0056/64/046/005/1842/1852

AUTHORS: Bukhovostov, A. P.; Popov, N. P.

TITLE: Capture of muons by polarized spin 1/2 nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1842-1852

TOPIC TAGS: muon capture, target nucleus polarization, recoil nucleus polarization, pseudoscalar form factor, tritium, hyperfine structure

ABSTRACT: In view of the low values obtained by G. Ya. Korenman and R. A. Eramzhyan (ZhETF, v. 45, 1111, 1963) for the asymmetry coefficient in the angular distribution of tritium nuclei following capture of polarized muons by He^3 nuclei, a formula is derived for the angular distribution of the recoil nuclei in the muon capture by light polarized spin-1/2 nuclei. It is shown that when the light nuclei are polarized along the direction of the muon beam the angular

ACCESSION NR: AP4037599

asymmetry of the recoil nuclei can reach an appreciable value, although the strong depolarization of the muons and of the target nuclei, due to the interaction which gives rise to both the fine and the hyperfine structure (which is also calculated in the article), may offset some of the increase in the asymmetry coefficient. For the angular distribution of $_3$tritium nuclei, following capture of muons by fully polarized He nuclei, the asymmetry reaches ~10%. When the pseudoscalar form factor is small the asymmetry proportional to cos θ (θ -- angle between the direction of emission of the recoil nucleus and the direction of the muon beam) may increase by a factor about 2.5 compared with asymmetry in capture of unpolarized nuclei. When the form factor reaches a value close to 30, the term proportional to P_2 cos θ begins to predominate. "The authors are deeply grateful to I. M. Shmushkevich for continuous interest in the work and for valuable remarks." Orig. art. has: 25 formulas.

Card 2/3

POPOVA, N. P.

POPOVA, N. P. -- "Russian Leterature on Metallurgy (Material on the History of Russian Technical Books)." Moscow State Library Institute imeni V. M. Molotov. Moscow, 1955. (Dissertation for the Degree of Candidate in Pedagogical Sciences.)

So; Knizhaya Letopis' No 3, 1956

POPOVA, N.S.

Comparative data on the lability and interactivity of neural processes in the auditory and visual analyzers in dogs and the lower monkeys. Zhur.vys.nerv.deiat. 12 no.1:88-94 Ja-F '62. (MIRA 15:12)

1. Laboratory of Conditioned Reflexes, Institute of Brain, U.S.S.R. Academy of Medical Sciences, Moscow.
(CONDITIONED RESPONSE) (VISION) (HEARING)