"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 35600-65

ACCESSION NR: AP5007611

2

creasing the amount of free carbon in the original mixture to 50% of the calculated amount to produce TiC reduced the free carbon in the product from 27-29% to 4-5%. Changing the 1:1 ratio of ammonia to nitrogen did not decrease the formation of the C-N bond, but using a nitrogen-hydrogen mixture had adverse effects. Experimentally determined temperatures for runs which approached saturation (near 50% at.) seemed to satisfy theoretical thermodynamic calculations. At 1000C the Ti-O relationship of the minimal concentration of oxygen (0.05%) in the solid solution Ti-N-C-O approaches that of the Ca-O relationship in CaO. With increasing temperatures, it decreases less rapidly than in CaO. Orig. art. has: 5 formulas and 8 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow steel and alloys institute)

SUBMITTED: 07Oct64 ENCL: 00 SUB CODE: IC, MT

NO REF SOV: 006 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 29514-65 EWP(e)/EWT(m)/EPF(n)-2/EWA(d)/EPR/EWP(t)/EWP(b) Ps-4/Pu-4
TJP(c) JD/JG/AT/WH

ACCESSION NR: AP5006187 S/0226/65/000/002/0015/0021

AUTHOR: Meyerson, G. A.; Kiparisov, S. S.; Gurevich, M. A.; Teng, Feng-hsiang 43 42 B

TITLE: Synthesis and properties of vapor-deposited hard alloys of the pseudobinary SiC-BC system

SOURCE: Poroshkovaya metallurgiya, no. 2, 1965, 15-21

TOPIC TAGS: silicon carbide, boron, silicon carbide alloy, boron alloy, alloy microstructure, alloy composition, alloy microhardness, alloy property

ABSTRACT: To determine the solubility of B and C in SiC a series of alloys of the pseudobinary SiC-BC system have been investigated. The alloys were produced by vapor deposition according to the reaction

$$7SiCl_4 + 7BBr_3 + 2C_7H_8 + 16.5H_2 = 7(SiC - BC) + 28HCl + 21HBr,$$

with the deposition rate varied from 0.033 to 0.008 mm/min. Depending on the deposition conditions, the obtained alloys were in the form of large light, dark grey, or fine black crystals. Alloys containing up to 40 mol% BC (13.2 wt% B) were single-phase alloys with about 1% free carbon, which means that B and C dissolve SiC in a

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 29514-65

ACCESSION NR: AP5006187

ratio B:C = 1:1, i.e., the B atoms replace Si atoms in the SiC lattice. In alloys containing more than 50 mol% BC (17.3 wt% B), a second phase, thermodynamically stable B_4C, and a corresponding excess of free graphite were observed; the free C content increased to 12—16 wt%. All SiC-BC alloys had an fcc lattice with a constant decreasing from 4.3580 Å for pure silicon to 4.3530 Å for alloys with 60 mol% BC. With B content increasing from 0 to 13.2 wt% (40 mol% BC), the microhardness of single-phase alloys increased continuously from 3380 to 4600 dan/mm^2, and then remained constant with further increases of B content. Thus, all experimental data have shown that the solubility limit of B in SiC is between 13 and 17 wt% (near 40 mol% BC), i.e., appreciably higher than was previously reported. The higher hardness and, consequently, higher wear resistance of SiC-BC alloys compared with pure SiC indicates the possibility of further improvement in the properties of SiC. Orig. art. has: 6 figures and 5 tables. [MS]

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute for Steel and Alloys)

SUBMITTED: 04Dec63 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 006 OTHER: 000 ATD PRESS: 3197

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 39687-65 EWP(e)/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EWA(d)/T/EPR/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4/Ps-4/Pu-4 IJP(c) JD/JG/WB/AT/WH

ACCESSION NR: AP5008274 S/0226/65/000/003/0062/0068

51
50
B

AUTHOR: Meyerson, G. A.; Kiparisov, S. S.; Gurevich, M. A.; Teng, Feng-hsiang

TITLE: Conditions of synthesis and some properties of sintered alloys of the pseudobinary B_4C-B_4Si system

SOURCE: Poroshkovaya metallurgiya, no. 3, 1965, 62-68

TOPIC TAGS: boron carbide alloy, boron silicide containing alloy, alloy synthesis, alloy property, alloy structure, alloy oxidation resistance

ABSTRACT: A series of B_4C-B_4Si alloys containing from 0 to 100 mol% B_4Si have been synthesized by the powder-metallurgy method and investigated to determine the optimum conditions of synthesis which would ensure a homogeneous structure and maximum density of the alloys while preserving a given composition. The components were found to form a continuous series of solid solutions. Alloys were obtained by hot compacting stoichiometric charge B_4C-rich alloys at 1900—2000C and B_4Si-rich alloys at 1800—1700C. The hot compacted specimens had

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 39687-65

ACCESSION NR: AP5008274

a homogeneous structure and a uniform density. With short-time compacting at lower temperatures, the majority of the specimens had a fine-grained two-phase structure; one phase (white) had a microhardness of 1500 dan/mm^2, the second (gray), 4000 dan/mm^2. Alloys compacted at higher temperatures and annealed alloys had a single-phase structure. Prolonged annealing of the alloys at 1900—1800C (alloys containing more that 70 mol% B_4Si, at 1350C) has no effect on the composition or density of the alloys, but produced a grain growth and considerable twinning. Depending on the composition, the microhardness of annealed alloys changed gradually with a maximum of 7000 dan/mm^2 for an alloy containing 60 mol% B_4C. Oxidation tests for 50 hr in air at 1000C showed the oxidation to follow a parabolic rate with a gradually decreasing oxidation rate and formation of a dense, strongly adhering vitrious film of a boro-silicate type. The alloy containing 70 mol% B_4Si had the lowest oxidation rate of 0.02 mg/cm^2·hr, i.e., 0.5 mm/year. Orig. art. has: 6 figures and 1 table. [MS]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 39687-65

ACCESSION NR: AP5008274

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute for Steel and Alloys)

SUBMITTED: 03Dec63 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 004 OTHER: 005 ATD PRESS: 3229

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 63337-65 EWT(d)/EWP(e)/EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/EWP(1) Pf-4/Pu-4 IJP(c) JD/JG

ACCESSION NR: AP5017479 UR/0370/65/000/003/0176/0181

669:621.762

AUTHOR: Meyerson, G. A.; Panov, V. S.

TITLE: Structure and physicomechanical properties of alloys of the WC-NbC-Co type

SOURCE: AN SSSR. Izvestiya. Metally, no. 3, 1965, 176-181

TOPIC TAGS: hard alloy, niobium containing alloy, tantalum containing alloy, tool material, niobium carbide, bending strength, impact toughness, powdered metal alloy, hardness

ABSTRACT: Powdered-metal hard alloys are the best of all tool materials used to cut heat resistant metals and alloys which are difficult to machine. Considering the similarity of the properties and structure of the carbides of tantalum and niobium, it may be assumed that the addition of niobium carbide is as effective as that of tantalum carbide in improving the physicomechanical properties (increasing wear resistance without detriment to strength and impact toughness) of hard alloys of WC-Co. This is of particular interest considering that tantalum is a scarce metal. Acting on this assumption, the authors investigated the effect of the addition of NbC on certain properties of WC-co alloys: bending strength, impact toughness, and hardness. The WC-Co alloys were prepared by the standard methods of the powder metallurgy of hard alloys, by pressing and sintering powders of tungsten carbide, niobium carbide, and cobalt. The phase composition of the alloys

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ACCESSION NR: AP5017479

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was determined by metallographic and X-ray methods. It was found that within the limits of the three-phase region (WC, NbC-WC, Co) the properties of the alloys change linearly with composition (given the same grain size of carbide phases) and are determined by the volumetric ratio between the phases. Within the limits of the two-phase region (NbC-WC, Co) the change in properties is a function of the concentration of tungsten carbide in the carbide solid solution, which leads to a deviation from the linear dependence. The addition of 2-10 mol.% NbC (in relation to the sum of WC + NbC) to WC-Co alloys enhances hardness at 20°C and bending strength at 800°C; the bending strength and impact toughness at 20°C decrease somewhat. When the NbC content exceeds 10 mol.% (in relation to the sum of WC + NbC) all these mechanical properties markedly deteriorate. The greatest increase in strength at 800°C following the addition of niobium carbide is observed for alloys with 5 mol.% NbC and 6-12% (by weight) Co. The effect of the addition of NbC on the properties of WC-Co alloys was compared with the effect of the addition of TaC; it was thus found that while the maximum increase in hardness at 20°C and in bending strength at 800°C for WC-Co alloys is observed on adding 2 mol.% TaC, the same effect is achieved on adding ~5 mol.% NbC. The further investigation of the alloys WC-NbC-Co containing 2-10 mol.% NbC (in relation to the sum of WC + NbC) and 6-12% Co by weight is of definite interest from the standpoint of their suitabili-

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 63337-65

ACCESSION NR: AP5017479

ty as tool materials. Orig. art. has: 3 figures, 1 table.

ASSOCIATION: none

SUBMITTED: 01Dec64 ENCL: 00 SUB CODE: MM, SS

NR REF SOV: 006 OTHER: 008

Cutting tools

14

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 26595-66 EWT(m)/EWP(e)/EWP(w)/ETC(f)/EWG(m)/T/EWP(t) IJP(c) JD/HW/JG/AT/

ACC NR: AP6013364 WH SOURCE CODE: UR/0370/66/000/002/0120/0124

AUTHOR: Panov, V.S. (Moscow); Meyerson, G.A. (Moscow); Funke, V.F. (Moscow)

ORG: none

56
54
B

TITLE: Structure and physical and mechanical properties of WC-TaC-Co hard alloys

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1966, 120-124

TOPIC TAGS: metal cutting, tungsten carbide, tantalum compound, cutting tool, carbide abrasive, bend strength, toughness, hardness, cobalt alloy

ABSTRACT:

The authors, in cooperation with the All-Union Scientific Research Institute of Hard Alloys (VNIITS), investigated the effect of composition, structure, and temperature on the bend strength, impact toughness, and hardness of a variety of WC-TaC-Co sintered carbides used in cutting tools for machining heat-resistant and other hard and tough materials.

It was found that alloys containing 2—90 mol% TaC (in respect to total WC+TaC) have a three-phase structure (WC, TaC, and Co), while those containing over 90 mol% TaC have a two-phase structure (TaC and Co).

2

Card 1/2 UDC: 669.017.13

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 26595-66

ACC NR: AP6013364 2

Additions of 2—5 mol% TaC increase considerably the hardness of sintered carbides at 20°C and the bending strength at 800°C, while the impact toughness and bend strength at 20°C remain about the same or decrease very slightly. However, a further increase in TaC content greatly lowers the bend strength of all sintered-carbide specimens.

An increase in cobalt content improves the bend strength at both 20°C and 800°C. It reaches a maximum at 800°C with 12—16 wt% cobalt, and at 20°C with 20 wt% cobalt.

As a result of the investigation, the following optimal composition of WC-TaC-Co sintered carbide is recommended for machining hard and tough metals and alloys: 2—5 mol% TaC (re total WC+TaC) and 6—12 wt% cobalt, depending on the machining conditions and the material to be machined.

Orig. art. has: 3 figures. [ATD PRESS: 4237-F]

SUB CODE: 20, 13, 11 / SUBM DATE: 28Sep64 / ORIG REF: 012 / OTH REF: 006

Card 2/2 BLG

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 32046-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/WW/JG/AT/WH

ACC NR: AP6013338 (A) SOURCE CODE: UR/0363/66/002/004/0604/0607

AUTHOR: Meyerson, G.A.; Fekhretdinov, F.A.; Kopeykin, V.A.; Medvedev, A.A.; Moiseytseva, Z.K. 62 B

ORG: none

TITLE: Thermodiffusive interaction of tantalum and boron carbide powder in a vacuum

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v.2, no. 4, 1966, 604-607

TOPIC TAGS: tantalum, boron compound, tantalum compound, carbide, thermal diffusion

ABSTRACT: The object of the study was to determine the phase composition and arrangement of diffusion layers on tantalum obtained by thermal diffusion in a boron carbide charge at 1200 – 1700C in a vacuum of 3×10^{-4} mm Hg. The phase composition and structure of the coatings on tantalum were analyzed by x-ray diffraction and microscopic examination. A diffusion coating consisting of the borides TaB_2, TaB, and Ta_2B and up to 4μ thick was found to be formed on the surface of the samples at 1200, 1300, and 1400C. After treatment at 1500, 1600, and 1700C, the powder patterns show strong lines of tantalum carbide TaC, and faint lines of TaB_2 and Ta_3B_4, indicating that TaC is the main phase in the reflecting layer. A faint line corresponding to the strongest

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L 32046-66

ACC NR: AP6013338

line of Ta_2B also appears. At these higher temperatures, the thickness of the coating increases to 32μ. Orig. art. has: 3 figures.

SUB CODE: 11 / SUBM DATE: 10Sep65 / ORIG REF: 004 / OTH REF: 003

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 32042-66 EWP(e)/ EWT(m)/EWP(t)/ETI IJP(c) JD/JG/AT/WH
(A)

ACC NR: AP6013339 SOURCE CODE: UR/0363/66/002/004/0608/0616

AUTHOR: Moyerson, G.A.; Zhuravlev, N.N.; Manelis, R.M.; Runov, A.D.; Stepanova, A.A.; Grishina, L.P.; Gramm, N.V.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Some properties of yttrium borides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 608-616

TOPIC TAGS: yttrium compound, boride, work function, thermionic emission

ABSTRACT: The thermionic and crystallographic constants of the borides YB_4, YB_6, and YB_{12} were measured, and the behavior of these materials in a vacuum at elevated temperatures was studied. The borides were prepared by the vacuum thermal method by reducing yttrium oxide with boron. YB_4 is indexed in a tetragonal lattice with constants a = 7.12, c = 4.04 ± 0.05 Å. YB_6 and YB_{12} are indexed in a cubic lattice with constant a = 4.102 and 7.506 ± 0.002 Å, respectively. It was shown that only YB_4 is stable during high-temperature treatment (up to 2750K); YB_6 and YB_{12} decompose to

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 44233-66 EWP(e)/EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/JG

ACC NR: AR6020940 SOURCE CODE: UR/0137/66/000/002/G039/G039

AUTHOR: Meyerson, G. A.; Amosov, V. A.; Liskovich, V. A.

ORG: none

TITLE: Universal laboratory set for investigating processes of high-temperature sintering of refractory metals

SOURCE: Ref. zh. Metallurg. Abs. 2G283

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 45, 1965, 14-17

TOPIC TAGS: sintering, high temperature sintering, refractory metal

ABSTRACT: A laboratory set is described for sintering refractory metals and their alloys in various gaseous media and in vacuo. The set is part of the production equipment for high-temperature sintering and (welding) of refractory metals and permits the use of both direct and indirect heating of rods. V. Pryanikova. Orig. art. has: 3 figures. [Translation of abstract] [NT]

SUB CODE: 11/

Card 1/1 MT UDC: 621.726.002.5

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 46038-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/JG/AT/WH

ACC NR: AT6022713 SOURCE CODE: UR/2848/66/000/041/0244/0253

AUTHORS: Meyerson, G. A.; Rakitskaya, Ye. M.

ORG: Moscow Institute of Steel and Alloys, Department for Metallurgy of Rare Metals and Metal Ceramics (Moskovskiy institut stali i splavov, Kafedra metallurgii redkikh metallov i metallokeramiki)

TITLE: Physico-chemical conditions for low-temperature carbonitration of oxides of high melting metals

SOURCE: Moscow. Institut stali i splavov. Sbornik, no. 41, 1966. Fizicheskaya khimiya metallurgicheskikh protsessov i sistem (Physical chemistry of metallurgical processes and systems), 244-253

TOPIC TAGS: titanium dioxide, niobium compound, nitrogen, ammonia, nitridation, carburization

ABSTRACT: The conditions for obtaining titanium and niobium nitrides and carbonitrides from the corresponding metal oxides were investigated. Prior to the experimental investigation, thermodynamic feasibility calculations based on recorded literature data were carried out. The results of these calculations are shown graphically. The carbonitration and nitration were carried out in alundum and graphite tube furnaces in presence of carbon black, in an atmosphere of N_2, NH_3, and a mixture of $N_2 + NH_3$. The gas flow rate of N_2 and NH_3 gases was 35 liters/h.

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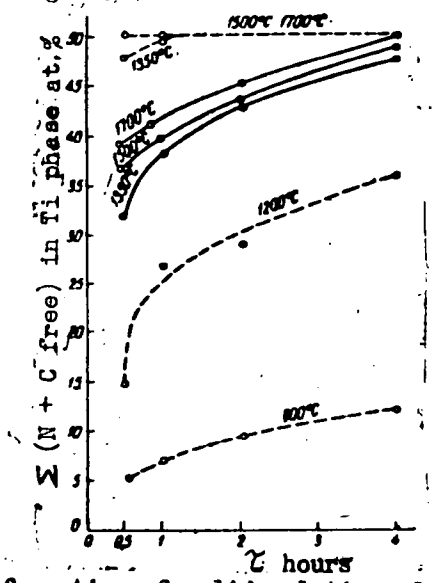
"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 46038-66

ACC NR: AT6022713

The experimental results are shown graphically (see Fig. 1).

Fig. 1. Carbonitration of the mixture TiO_2 + C in a current of nitrogen and ammonia: solid line - nitrogen; dashed line —— ammonia.



It was found that the standard free energy for the formation of solid solution of metal oxides in the metal for an oxygen concentration of ~ 0.05 wt % was given by

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 45038-66

ACC NR: AT6022713

$$\Delta Z^{\circ}_{T_{Ti(O)}} = -128\,840 + 6{,}23T;$$

$$\Delta Z^{\circ}_{T_{Nb(O)}} = -161\,374 + 34{,}2T.$$

The carbonitration of both metal oxides in the presence of carbon is considerably easier in an atmosphere of ammonia than in nitrogen. This conclusion is also corroborated by thermodynamic calculations. Orig. art. has: 5 graphs and 16 equations.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 06575-67 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) AT/WH/JD/JG

ACC NR: AP6029816 (A) SOURCE CODE: UR/0363/66/002/008/1429/1433

AUTHOR: Meyerson, G. A.; Rakitskaya, Ye. M.; Bulgakov, V. N.; Ladygo, A. S.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

31
B

TITLE: Investigation of the conditions for the preparation of niobium carbide and niobium carbonitride from niobium pentoxide

27 27 27 27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1429-1433

TOPIC TAGS: niobium compound, carbide, nitride, nitrogen, ammonia

ABSTRACT: Preparation of NbC from Nb and NH_3 was studied at 1200°-1700°C for 1-8 hrs and the preparation of $NbN_{0.3}C_{0.7}$ from NbO_5, C, and N_2 and from NbO_5 and C in an NH_3 atmosphere was studied at 1000°-1700°C for 1-2 hrs. In general it was found that higher temperatures and longer reaction durations led to higher nitrogen content in the niobium carbide product. The experimental data as well as the thermodynamic calculations show that above 1620°C the NbC with less than 0.1% oxygen can be prepared from niobium oxide in an NH_3 atmosphere. The experimental data and the thermodynamic calculations also show that niobium carbonitride with as little as 0.01% oxygen content can be prepared from niobium oxide, carbon, and ammonia. In general, the formation of nitrides and carbonitrides in NH_3 atmosphere was faster than in the N_2 atmosphere. This is explained in terms of the high reactivity of nitrogen atoms readily generated

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 06575-67

ACC NR: AP6029816

on oxide surfaces by the dissociation of ammonia. Orig. art. has: 3 figures and 7 formulas.

SUB CODE: 07/ SUBM DATE: 13Oct65/ ORIG REF: 006/ OTH REF: 005

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

ACC NR: AP6036905 (N) SOURCE CODE: UR/0226/66/000/011/0077/0084

AUTHOR: Manelis, R. M.; Meyerson, G. A.; Zhravlev, N. N.; Telyukova, T. M.; Stepanova, A. A.; Gramm, N. V.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Some specific features of the synthesis of yttrium and gadolinium borides and some of the boride properties

SOURCE: Poroshkovaya metallurgiya, no. 11, 1966, 77-84

TOPIC TAGS: yttrium boride, gadolinium boride, chemical synthesis, boride, yttrium, gadolinium, porosity, hardness, bending strength

ABSTRACT: Yttrium and gadolinium borides were synthesized from respective oxides with amorphous boron at 1400—2000C in a vacuum of $2—5 \cdot 10^5$ mm Hg. The reaction MeO + 2B → MeB + BO yielded YB_4, YB_6 and YB_{12} yttrium borides and GdB_4 and GdB_6 gadolinium borides. Single-phase YB_6 and YdB_6 hexaborides were obtained at 1700C; at higher temperature they decomposed into tetraborides and boron. Single-phase YB_{12} compound was obtained at 1600—1700; at higher temperatures it decomposed into YB_{602} YB_4 compounds. Yttrium and gadolinium boride powders were then compacted, sintered in vacuum, and tested. The porosity of yttrium-boride specimens was 22—26%, and that of gadolinium-boride specimens was 30—32%. The microhardness and bend strength of YB_4; YB_6, and YB_{12} was 2850 dan/mm^2, and 290 dan/cm^2, 2575 dan/mm^2, and 270 dan/cm^2, and 2500 dan/mm^2, and 165 dan/cm^2, respectively. The microhardness

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ACC NR: AP6036905

and bend strength of GdB_4 and GdB_6 was 1900 dan/mm^2 and 675 dan/mm^2 and 1850 dan/mm^2 and 320 dan/cm^2, respectively. The boride contained almost no impurities. The most oxidation resistant were gadolinium borides and, among yttrium borides, the YB_{12} compounds. Orig. art. has: 5 figures and 6 tables.

SUB CODE: 13, 11/ SUBM DATE: 12Apr66/ ORIG REF: 008/ OTH REF: 003/

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

ACC NR: AP7006202

SOURCE CODE: UR/0363/67/003/001/0054/0060

AUTHOR: Manelis, R. M.; Meyerson, G. A.; Grishina, L. P.

ORG: none

TITLE: Thermionic emission of certain gadolinium borides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 1, 1967, 54-60

TOPIC TAGS: boride, gadolinium compound, thermionic emission

ABSTRACT: The thermionic emission of the single-phase compounds GdB_4 and GdB_6 and two-phase compositions $GdB_4 + Gd_2O_3$ and $GdB_6 + B$ was investigated. The effective work function ϕ_t and temperature dependence $d\phi/dT$ were determined. GdB_4 was found to have the best emissive properties ($j = 0.68$ A/cm^2, $\phi = 3.13$ eV at 1750°K). With GdB_6 on a tantalum substrate, one can record a maximum emission current of only 1.4×10^{-5} A/cm^2, $\phi = 3.41$ eV at a temperature of 1600°K. GdB_4 is more stable than GdB_6; the latter decomposes in a vacuum at high temperatures to form GdB_4 and B. The impurities Gd_2O_3 in GdB_4 and B in GdB_6 markedly decrease their emission per unit surface of the composition. In their emissive properties, the gadolinium borides studied are much inferior to lanthanum hexaboride, which at 1600°K has $j = 1.34$ A/cm^2, $\phi = 2.71$ eV, and at 1800°K $j = 7.15$ A/cm^2, $\phi = 2.85$ eV. The data show that the emissive properties in the series of compounds rare earth metal - boron of the compositions

Card 1/2

UDC: 546.662.271+537.32

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

ACC NR: AP7006202

studied decline with decreasing M:B ratio in the boride. Orig. art. has: 3 figures, 3 tables and 2 formulas.

SUB CODE: 20/ 07/ SUBM DATE: 18Jan66/ ORIG REF: 011/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G.B.

ASTASHENKOV, Petr Timofeyevich, inzhener-podpolkovnik; MEYERSON, G.B., doktor tekhnicheskikh nauk, professor, redaktor; KADER, Ya.M. redaktor izdatel'stva; SOROKIN, V.V., tekhnicheskiy redaktor

[Atomic industry] Atomnaia promyshlennost'. Moskva, Voen. izd-vo M-va obor. SSSR, 1956. 236 p. (MLRA 10:5)
(Atomic power industry)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

Doc Agricult Sci

MEYERSON, G. M.

Dissertation: "Conditions for the Effect of Nitrous and Phosphorus Fertilizers in the Irrigated Zone of Central Asia." 16/6/50

All-Union Sci Res Inst of Fertilizers, Agricultural Technology and Soil Science

SO Vecheryaya Moskva
Sum 71

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

1. MEYERSON, G. M., TIMOKHIN, N. N, BURIKHIN, N.N.

2. USSR (600)

4. Irrigation Farming

7. Agronomic principles of crop rotations in new irrigated districts. Sov. agron. 11 no. 3, 1953

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

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G.M.

Importance of the agricultural characteristics of land resources in land-use planning. Pochvovedenie no.1:56-61 Ja '58. (MIRA 11:2)

(Soils) (Farm management)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G. M.

MEYERSON, G.M.

Reclamation and use of lowlands in the non-Chernozem zone. Zemledelie 6 no.1:55-58 Ja '58. (MIRA 11:1)

1. Moskovskiy institut zemleustroystva.
(Alluvial lands)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G.M., prof., doktor sel'skokhozyaystvennykh nauk

Agricultural evaluation and mapping of fields as the basis for differentiated cultivation practices. Zemledelie 23 no.9:41-46 S '61. (MIRA 14:12)

1. Moskovskiy institut inzhenerov zemleustroystva.
(Agriculture--Maps)
(Tillage)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G.M.

Detailed study of the characteristics of various fields from the point of view of cultivation practices. Vop. geog. no.54: 96-109 '61. (MIRA 15:3)

(Landforms) (Tillage)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

1. MEYERSON, G.M.

2. USSR (600)

4. Contagion and Contagious Diseases

7. Work of the Administration of the Ukrainian Branch of the Society of Epidemiologists, Microbiologists and Specialists in Infectious Diseases during 1951, Mikrobiol.zhur. 14 no. 1, 1952.

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

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, G M

~~Golota, YA. A. Material on cases of erysipeloid in humans.~~

Meyerson, G. M. Mechanism of the washing action of soap.

Meyerson, G. M. Insecticidal soaps.

Meyerson, G. M. Bactericidal soaps.

Materialy nauchnykh konferentsii, Kiev, 1949. 2 8pp
(Kievskiy Nauchno-issledovatel'skiy Institut Epidemiologii i Mikrobiologii)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

DYUL'DINA, A.S.; MEYERSON, G.M.

Efficient use of disinfectant solutions. Vrach.delo no.11:111-113 N '60. (MIRA 13:11)

1. Dezinfektsionnaya laboratoriya Kiyevskogo instituta epidemiologii i mikrobiologii.
(DISINFECTION AND DISINFECTANTS)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, I. G. and POLOTOVSKIY, L. S.

"Electrical Engineering" (Elektrotekhnika), Military Publishing House, 1949, 240 pp.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

KITAYEV, Yevgeniy Vasil'yevich, prof., doktor tekhn.nauk, zaslushennyy deyatel' nauki i tekhniki [deceased]; GREVTSEV, Nikolay Fedorovich, dotsent, kand.tekhn.nauk; MEYERSON, I.G., dotsent, kand.tekhn.nauk, nauchnyy red.; VLASOVA, Z.V., red.; KOROVENKO, Yu.N., tekhn.red.

[General course in electrical engineering] Kurs obshchei elektrotekhniki. Izd.5., perer. i dop. Leningrad, Gos.soiuznoe izd-vo sudostroit. promyshl., 1960. 709 p. (MIRA 14:4)

(Electric engineering)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

BAL'YANK Roblen Khorenovich; MEYERSON, I.G., kand. tekhn. nauk, retsenzent; SMIRNOV, Yu.I., red. ; SHISHKOVA, L.M., tekhn. red.

[Low power transformers] Transformatory maloi moshchnosti. Leningrad, Gos. sciuznoe izd-vo sudostroit. promyshl., 1961. 366 p. (MIRA 14:10)

(Electric transformers)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

BLAZHKIN, A.T., doktor tekhn. nauk. prof.; BESEKERSKIY, V.A., doktor tekhn. nauk, prof.; AZIMOVA, K.F., kand. tekhn. nauk, dots.; LANSKOV, V.D., kand. tekhn. nauk, dots.; FABRIKANT, Ye.A., kand. tekhn. nauk, dots.; GUL'DIN, Yu.V., inzh. MEYERSON, I.G., dots.. kand. tekhn. nauk, dots., retsenzent. FROLOV, B.K., red.

[General electrical engineering] Obshchaia elektrotekhnika. Moskva, Energiia, 1964. 655 p. (MIRA 17:12)

1. Prepodavatel' Leningradskogo mekhanicheskogo instituta (for Blazhkin, Besekerskiy, Azimova, Lanskov, Fabrikant, Gul'din).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

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[illegible]

[illegible] corrosion-fatigue [illegible]

Metallov. i term. obr. met. [illegible]

1. Fiziko-mekhanicheskiy institut [illegible]

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 3590-66 EWT(m)/EWP(w)/EPF(c)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD/WB

ACCESSION NR: AP5022409 UR/0369/65/000/004/0499/0502

AUTHOR: Boltarovich, A. V.; Pikhmurskiy, V. I.; Gutman, E. M.; Meyerson, I. L.; Karpenko, G. V.

TITLE: Corrosion fatigue of VT3-1 titanium alloy

SOURCE: Fiziko-khimicheskaya mekhanika materialov, no. 4, 1965, 499-502

TOPIC TAGS: titanium alloy, alloy corrosion, alloy corrosion resistance, alloy fatigue strength, corrosion fatigue strength/VT3-1 titanium alloy

ABSTRACT: Unnotched and notched specimens of VT3-1 titanium [U.S. Ti155A] alloy in the as-delivered condition (annealed for 1 hr at 870C, furnace cooled to 650C, held for 1 hr, air cooled to room temperature) or after aging at 400—900C for 1 hr or at 500C for 2—100 hr were tested for corrosion resistance in 40—78% H_2SO_4 and for fatigue behavior in air or in a 3% solution of NaCl. The alloy aged at 700C had the highest and the alloy aged at 800—900C had the lowest corrosion rate: 0.140 and 0.121 mm per year, respectively, compared with 0.124 mm per year for alloy in the as-delivered condition. The highest corrosion rate results from the maximum dispersion of the β-phase structure, which increases the active area of microscopic galvanic pairs that cause corrosion. With aging at temperatures higher than 700C,

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ACCESSION NR: AP5022409

the structure components coagulate, thus decreasing the active area of microgalvanic pairs and, correspondingly, the corrosion rate. In isothermal aging, the corrosion rate increased with exposure time, e.g., at 500C from 0.123 to 0.140 mm per year for 2 and 100 hr, respectively. The corrosion incubation period of identically aged VT3-1 alloy increased with the exposure time and decreased with increasing acid concentration. The alloy had high corrosion rates at acid concentrations of 40—70 and 78% and a minimum rate at a 53% concentration. In fatigue and corrosion fatigue tests, unnotched and notched alloy specimens were subjected to rotating bend test at 40C in air (10^7 cycles) and in humid air (97% humidity) and in a 3% NaCl solution ($5 \cdot 10^7$ cycles). The test results (see Fig. 1 of Enclosure) showed that the alloy fatigue strength in air was 52 dan/mm^2. Under the action of 3% NaCl solution, the conditional endurance limit continuously decreased to 48 dan/mm^2 at $5 \cdot 10^7$ cycles. Aging at 500C for 2 hr had no effect on the endurance limit of the alloy in all investigated media. In corrosive media, the effect of stress concentrators on fatigue strength was negligible. Previous corrosion decreased the fatigue strength of VT3-1 alloy in air from 52 to 39.5 dan/mm^2. In 3% NaCl solution, the conditional endurance limit stress at the $5 \cdot 10^7$ cycle basis was 48 and 38 dan/mm^2 for virgin and precorroded specimens, respectively. The VT3-1 alloy appears to be a suitable material

Card 2/4

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L 3590-66

ACCESSION NR: AP5022409

3

for parts working under stresses in aggressive media. Orig. art. has: 1 figure and 1 table. [MS]

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov (Physicomechanical Institute, AN UkrSSR)

44,55

SUBMITTED: 04Apr65 ENCL: 01 SUB CODE: MM

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4114

Card 3/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 3390-66

ACCESSION NR: AP5022409

ENCLOSURE: 01

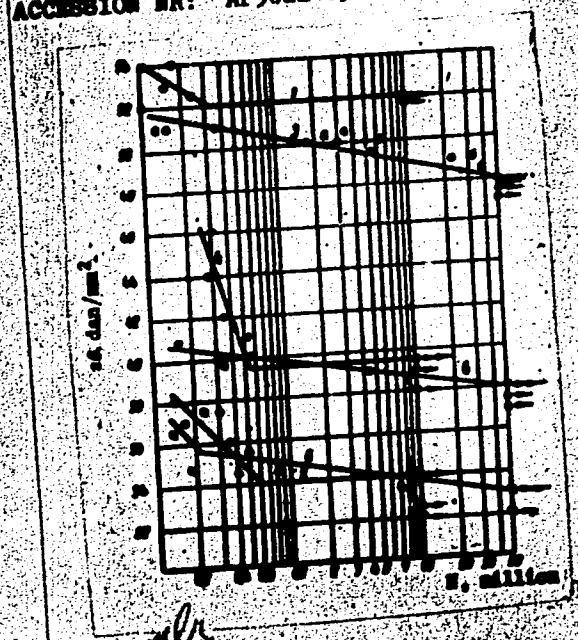

Fig. 1. Fatigue and corrosion-fatigue strength of VT3-1 titanium alloy

1a - Unnotched specimens; 2б - notched specimens; 3 - specimens tested in humid air at 40C; 4_c - pre-corroded specimens; 1, 2, 4 - tests in air; a, б, b - tests in a 3% NaCl solution.

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 11422-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/EWP(1) MJW/JD/WB

ACC NR: AP6002118 SOURCE CODE: UR/0369/65/001/006/0694/0696

61
59
13

AUTHOR: Pokhmurskiy, V.I.; Boltarovich, A.V.; Tabinskiy, K.P.; Meyerson, I.L.; Karpenko, G.V.

ORG: Physicomechanical Institute, AN UkrSSR, L'vov (Fiziko-mekhanicheskiy institut AN UkrSSR)

TITLE: Effect of certain coatings on the fatigue strength and corrosion-fatigue strength of Kh17N2 steel

44,55,1 44,55,1 44,55,1

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 6, 1965, 694-696

TOPIC TAGS: fatigue strength, steel, nickel, cadmium, protective coating, organosilicon compound, metal property

ABSTRACT: The fatigue strength and corrosion-fatigue strength of hardened and tempered Kh17N2 steel were measured on NU machines after a nickel-cadmium and protective lacquer coatings (302 lacquer and V-58 material, a solution of an organosilicon polymer in toluene with mineral additives) were deposited on its surface. A 3% NaCl solution was used as the corrosion medium. In the latter, the coatings were found to affect considerably the strength of cyclically deformed steel, particularly at high stress amplitudes and

Card 1/2

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L 11422-66

ACC NR: AP6002118

2

a small number of cycles. At about 2×10^7 cycles, the best protective effect was shown by the coating of 302 lacquer, but the fatigue strength decreased sharply, owing to a breakdown in the continuity of the coating. The situation was similar in the case of the nickel-cadmium electrodeposit, except that the fatigue limit was lower than with the 302 lacquer. At about 2×10^7 cycles, an extensive attack of the Ni-Cd coating and sharp drop of the limit of corrosion-fatigue strength took place. Deposition of V-58 had practically no effect on the corrosion-fatigue resistance of the steel, owing to the porosity and loose adhesion of this coating. Orig. art. has: 1 figure.

SUB CODE: 11 / SUBM DATE: 20Jun65 / ORIG REF: 003

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Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 07565-67 EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/EM/GD

ACC NR: AT6029369 (N) SOURCE CODE: UR/0000/66/000/000/0243/0248

AUTHOR: Prokof'yev, K. A. (Leningrad); Yepanechnikov, M. M. (Leningrad); Meyerson, I. L. (Leningrad)

52

B+1

ORG: none

TITLE: Damping properties of blades with individual tail-pieces of the "pine-tree" type

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Rasseyaniye energii pri kolebaniyakh uprugikh sistem (Energy dissipation during vibrations of elastic systems). Kiev, Naukova dumka, 1966, 243-248

TOPIC TAGS: damping analysis, turbine blade, turbine design

ABSTRACT: The experimental apparatus consisted of a one-stage turbine, hooked up with a direct current electric motor. The air was supplied by a compressor. The article gives a detailed diagram of the experimental apparatus. For experimental determination of the logarithmic decrement from the oscillograms of the damped vibrations the following relationship was used:

$$\delta_{\text{эксп}} = \frac{1}{z} \ln \frac{a_k}{a_{k+z}},$$

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L 07565-67

ACC NR: AT6029369

where δ_m is the mean logarithmic decrement of the vibrations for the period of time in the course of which the blade completes z vibrations, at the same time as the amplitude of the vibrations changes from the value a_k to a_{k+z}. The values of the amplitudes a_k and a_{k+z} were determined directly from the recorded oscillograms. The experimental results are shown in graphic form. It was established that 85% of the energy dissipation is due to friction in the tail-piece joint, 7% to losses in the material of the sample, and the remaining 8% to aerodynamic damping and energy losses in the rotor disk. Orig. art. has: 3 figures.

SUB CODE: 10, 20, 21 SUBM DATE: 22Feb66

Card 2/2 nst

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, KH. S.

7567 MEYERSON, KH. S. TIPOVOY proyekt detskikh yasley na 88 mest. (Zdaniye Kirpichnoye). Izm. K proyektu- V svyazi s umen'sheniyem stoimosti stroitel'stva. Izd. 5-ye-M., 1953 (vyp. dan. 1954) 34 s. 1 5 L. chert. 30 sm (M-vo zdravookhraneniya SSSR. Giprozdrav. Proyekt No 779-3 (51)). 500 ekz. (250). 11 r.- Avt. proyekta: Meyerson, Kh. S., Svetogr. izd.- 613.953.4:692
(55-3093)

SO: Knizhnaya LeTopis - Vol. 7, 1955

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, L. A.

The displacement of the maximum (minimum) in the diagrams of additive properties in binary systems. L. A. Meerson. *Izvest. Akad. Nauk Kazakh. S.S.R., Ser. Khim.* 1955, No. 8, 25-7(in Russian); cf. *C.A.* 49, 16418a.—Math. A formula is derived for the displacement of the max. $(\Delta x = 1/2)\{1/[1 + ((x_C - x_A)(x_C - x_B)/(x_A - x_B)^2)]\}^{1/2}$, where x_A, x_B, and x_C are the magnitudes of the properties of the components and the compd., resp., under consideration and k = the equil. const. Another formula is given that contains also k_1, the equil. const. at the temp. T_1; in this way the effect of the temp. on the shift of the max. is also taken into account. Werner Jacobson

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, L.A.

Form of the diagram for binary systems. Izv.AN Kazakh.SSR.Ser.khim. no.8:28-34 '55.
(Phase rule and equilibrium) (MLRA 9:4)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, L. A.

Diagrams of binary systems with associated components. Zhur. fiz. khim. 37 no. 3:634-640 Mar '63. (MIRA 17:5)

1. Belorusskiy tekhnologicheskiy institut.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 19623-65 EPA(s)-2/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EPA(bb)-2/EWP(b) Pf-4/Pt-10 ASD(f)-2/AFMDC/ASD(m)-3 MJW/JD/WB/EM

ACCESSION NR: AP4047507 S/0129/64/000/010/0028/0031

AUTHOR: Karpenko, G. V.; Meyerson, I. L.; Babey, Yu. I.; Tabinskiy, K. P.; Kuslitskiy, A. B.

TITLE: Corrosion and corrosion fatigue resistance of Kh17N2 and SN3 steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 10, 1964, 28-31, and bottom half of insert facing p. 40

TOPIC TAGS: stainless steel, steel corrosion, steel corrosion fatigue, precipitation hardenable steel, Kh17N2 steel, SN2 steel, steel corrosion resistance, steel corrosion fatigue resistance, anticorrosion coating, 302 varnish

ABSTRACT: The corrosion and corrosion fatigue of Kh17N2 (0.12%C, 17.23% Cr, 1.84% Ni) and SN3(0.09%C, 16.93% Cr, 4.71% Ni, 3.31% Mo) stainless steel have been investigated. Steels were heat-treated to a hardness of 38--40 and 40--42 HRC, respectively. The test results showed that the SN3 steel has a higher corrosion resistance than the Kh17N2 steel, e.g., by 2.5 times in 53% sulfuric acid. The SN3 fatigue strength in air

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ACCESSION NR: AP4047507

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is 10% higher than that of the Kh17N2 steel. In a 3% sodium-chloride solution, the fatigue strength of both steels decreases by about the same factor, compared with that in air (see Fig. 1 of the Enclosure) and at $N = 2 \cdot 10^7$ cycles, is about 2 times lower than that in air. This confirms the absence of a direct relation between the corrosion resistance and the corrosion fatigue resistance of the metal. The SN3 steel is preferable to Kh17N2 steel for compressor blades working in aggressive media. Coating with 302 varnish (composition unidentified) increases by 1.5 times the corrosion fatigue strength of Kh17N2 and SN3 steels. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UkrSSR(Physiomechanical Institute AN UkrSSR)

SUBMITTED: 00 ENCL: 01 SUB CODE: MM

NO REF SOV: 009 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

L 19623-65

ACCESSION NR: AP4047507

ENCLOSURE: 01

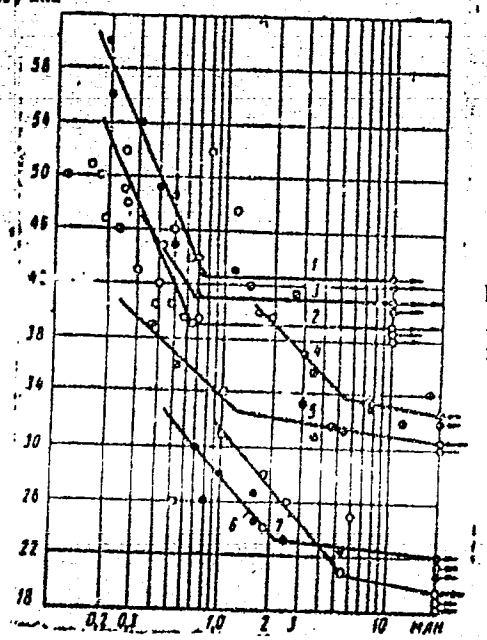

Fig. 1. Fatigue curves of uncoated (1,6) and 302 varnish-coated (4) SN3 steel, and uncoated (2,7) and 302 varnish-coated (3) Kh17N2 steel in air (1,2,3) and in a 3% solution of sodium chloride (4,5,6,7).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

Thermodynamic properties of polymer solutions. V. The difference between the fractions of gelatin. S. M. Lipatov and S. I. Maurzan. *Kolloid. Zhur.* 9, 433-7 (1947); cf. *C.A.* 29, 3987; 40, 4095; *Doklady Akad. Nauk S.S.S.R.* 48, 434(1945); *Kolloid Zhur.* 7, 8, 144 (1946).—The ratio b/a of the axes of the particles was detd. for 3 gelatin fractions, the fraction insol. at and below 35° (I), that insol. at 10° (II), and that insol. at 5° (III), from measurements, at 20°, of the sp. viscosity $\eta_s = KcV$ (where c = concn. in g./cc., V = sp. vol. = 0.67 cc./g.) in 0.1% soln., and Kuhn's formula $K = 2.5 + [(1/n)(b/a)^2]$. The soln. of I at 20° was obtained by dissolving at 40° and cooling to 20°; II and III dissolve directly at 20°. For the 3 fractions, η_s = 0.40, 0.128, and 0.04, b/a = 24, 15, and 5, resp.; thus, I consists of fairly elongated chains, but shorter than those of rubber, whereas III is close to the shape of globular proteins. Osmotic pressure measurements, in Herzog's osmometer, gave, for I, II, and III, at 20°, P/c = 6.3, 18.0, and 27.9, at 25°, 7.0, 18.3, and 28.4. Consequently, only I has a high temp. coeff., whereas II and III behave like ideal solns. and are, in this respect, comparable to solns. of casein and albumin. In contrast to the ideal II and III, fraction I is unstable in soln. at 20°, which is indicated by the pos. sign of the free energy; accordingly, the soln. of this fraction has abnormally high temp. coeffs. of viscosity and osmotic pressure, and shows a tendency to gelification. From the soly. curve of I below 30°, ΔH = 37,800 cal./mole; comparison of this molal heat with the calorimetrically detd. 10 cal./g. (L., *Kolloid Zhur.* 7, 8, 144(1946)) gives, for the mol. wt., 3750. The discrepancy between this mol. wt. and the value of 10,000 (from osmotic pressure of gelatin at 60°) means, in terms of Eyring's representation of the fusion as rupture of bonds at segments only, that the fraction of the surface of the chains involved in salt formation is 3750/10000 = 0.38. For II, this fraction is 0.1.

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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

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Thermodynamic properties of polymer solutions. Effect of temperature on the heat of solution of polymers in various liquids. S. M. Lipatov and S. J. Meerson (Moscow Textile Inst.). *Kolloid. Zhur.* 12, 122-30 (1950); cf. *C.A.* 43, 8837*f*.—The heat Q of soln. of cellulose nitrate (I) with 11.92% N and 0.24% H_2O was const. (18 cal./g. below t_1° and 12 cal./g. above t_2°); t_1 and t_2 were 25° and 40° for Me_2CO, 27° and 50° for EtOAc, and 37° and 60° for BuOAc. The Q in dibutyl phthalate (II) and tritolyl phosphate (III) was less than 2 at 20° and increased to a const. value of 12 reached at 70° or 90°. At 15°, viscosity of I in BuOAc was greater than in Me_2CO but both were equal above t_2. Above t_2, Q is independent of temp. and solvent because mol. solns. are obtained. The opposite signs of dQ/dt for "solvents" and "plasticizers" show that the mol. interactions between I and these 2 groups of liquids are different. In mixts. Me_2CO 1 + III 19 and BuOAc 1 + III 5.5, Q was independent of temp. (20-90°). The heat q of absorption of vapor by I decreased when the amt. absorbed (i) increased and became zero when i was 0.065, 0.100, and 0.112 g./g. for Me_2CO, EtOAc, and BuOAc, resp. This i was 0.04 for MeOH for both 18° and 50°. Thus, q = 0 when one glucose unit has absorbed 3 mols. of solvent whatever the solvent and the temp. The Q of polyvinyl chloride in pyridine, $PhNO_2$, and II also decreased on increasing temp. only within an interval of about 30°. The Q at 25° of I in mixts. of castor oil (IV) and II rose from the value (1) in pure IV to the value (3) in pure II when the concn. of II rose from 50% to 70%. J. J. Bikerman

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CA

Heat of solution of nitrocellulose films obtained from solutions of various concentrations. S. M. Lipatov and S. I. Moerson (Moscow Textile Inst.). *Kolloid. Zhur.* 12, 427-30(1950).—The heat Q of soln. of cellulose nitrate (I) films prepd. from more concd. solns. is greater than Q of films from more dil. solns., because the former contain less solvent. I used had 11.80% N and 2.4% H_2O. Films prepd. by evaps. of the solvent (Me_2CO) in air had, at 18°, Q = 10 and 12 cal./g., resp., (in Me_2CO) when the original concn. C was 15% and 2%, resp. When EtOAc was the solvent, Q at 20° was 10 and 12 cal./g., when C was 15% and 2%, resp. When films from Me_2CO were dried to const. wt. at 66-70° and then dissolved, Q at 15° was 20 and 10, resp., when C was 15% and 2%, resp. The Q of I that had absorbed x% MeOH from vapor and then dissolved in MeOH, was, at 10°, 16 at x = 0, 8 at x = 7%, and 3 at x = 20%. The decrease of Q on a temp. increase (up to 60-70°) was less steep the smaller was the Q at the lowest temp. The Q-temp. curves of the dried films almost coincided for c = 15% and c = 2%. The energy of intermol. action is less when C is less. J. J. Bikerman

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C.A

2

Thermodynamic properties of polymer solutions. VIII. Effect of temperature and the nature of the solvent on the osmotic pressure of cellulose nitrate solutions. S. I. Meerson and S. M. Lipatov (Moscow Textile Inst.). *Kolloid. Zhur.* 13, 301-8(1951); cf. *C.A.* 43, 8837f; 44, 5666c.—The osmotic pressure P was measured in a glass osmometer with a membrane of regenerated cellulose, first plasticized with triethylene glycol or glycerol. P increased with concn. c more rapidly than c (up to c = 1.4%). Extrapolation to c = 0 showed the mol. wt. of cellulose nitrate contg. 11.94% N and 0.2% ash to be 40,000 in $COMe_2$ at 22° and in BuOAc at 18° and 40°. At c = 1.4%, P increased from 5° to a max. at about 20° and then slowly decreased when the temp. was raised to 80° (in BuOAc) or 40° (in $COMe_2$). In the interval 5-20°, P increased with the abs. temp. T more rapidly than did T itself; apparently dissocn. of the solvent took place and absorbed heat, and the "anomaly" of P was due to an energy and an entropy term. At higher temp. an exothermal effect must have occurred. The similarity between the above systems and the aq. solns. of sucrose is pointed out.

J. J. Bikerman

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MEYERSON, S.I.

CATALYST

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

(2)
Chem

Thermodynamic properties of polymer solutions. IX. Effect of temperature and solvent nature on the osmotic pressure and viscosity of the solutions of cellulose esters and others. S. I. Meerson and S. M. Lipatov. Colloid J. (U.S.S.R.) 14, 471-9(1952)(Engl. translation).—See C.A. 47, 3086f. H. L. H.

9-2-54
JJP

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

LIPATOV, S.M.; MEYERSON, S.I.

Interaction of polymers with individual liquids and their mixtures. Soob.o nauch.rab.chl.VKHO no.3:31-35 '55. (MIRA 10:10)
(Polymers) (Liquids) (Heat of solution)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, S.I.

The equilibrium state of jellies. S. M. Lipatov and S. I. Meerson (Moscow Textile Inst.). *Kolloid. Zhur.* 17, 210-4(1955).—The compns. of gels obtained by (a) syneresis or (b) swelling should be identical in the absence of impurities that stabilize the relaxation properties in gels. Nefman and Nefman (*C.A.* 47, 947f) obtained wrong results for the heat of gelatin, because their materials were impure. Also in *Colloid J. U.S.S.R.* 17, 211-14(1955)(Engl. translation).

J. J. Bikerman

H ①

Chair of Physical Chem

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MEYERSON, S.I.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEVERSON, S.I

Dependence of the heat of solution of polymers on their physical state. S. I. Meerson and S. M. Lipatov (Moscow Textile Inst.)

J. J. Bikerman

Retype of Chemical Abstract

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

The equilibrium state of high-polymer gels. S. M. Lipatov and S. I. Mrerson. Kolloid. Zhur. 19, 350-3 (1957)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

AUTHORS: Meyerson, S.I., Lipatov, S.M. 69-20-3-16/24

TITLE: The Melting of Gelatine Gels (K voprosu o plavlenii studney zhelatiny)

PERIODICAL: Kolloidnyy zhurnal, 1958, vol XX, Nr 3, pp 353-360 (USSR)

ABSTRACT: It has been shown by thermochemical investigations, that the heat effect of the polymer solution process is a function of the temperature, and the natures of the polymer and solvent. In the article, experiments were made to determine the dissolution temperature of gelatine gels dissolved in ureas at various temperatures. Table 2 shows that an increase in solution concentration increases the heat effect of the dissolution. The melting heat of the gel measured in cal/g of the polymer, the temperature range of the melting and the melting temperature depend on the concentration of the gel. The dependence of the heat capacity of a 62% gelatine gel on the temperature has been studied. The curve $C_p = f(t^o)$ passes through a maximum. The dependence of the gel volume on the temperature has been studied by the dilatometric method. It has been shown that on the curve $h = f(t^o)$ there is one inflexion point which corresponds to the melting temperature. The curve $\alpha = f(t^o)$ passes through a maximum. The result

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The Melting of Gelatine Gels

69-20-3-16/24

of the investigations is that the melting heat is absorbed in the solution of gelatine within a broad temperature range. There are 7 graphs, 2 tables, and 11 references, 6 of which are Soviet, 3 English, and 2 German.

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute)

SUBMITTED: March 2, 1958

Card 2/2 **1. Gels—Melting 2. Gels—Temperature effects**

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, S. I.

19(6)

AUTHOR: Rebinder, P. A., Academician SOV/30-59-1-5/57

TITLE: New Trends of Colloid Chemistry (Novyye puti razvitiya kolloidnoy khimii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 44-51 (USSR)

ABSTRACT: At present, colloid chemistry plays an especially important part in political economy as it is a physical-chemical science concerning substances of modern engineering. It is of great practical importance that at present it is possible to carry on uninterrupted transitions from lyophobic to lyophilic systems. Thus, it is possible to obtain technically important substances with the required structural-mechanical properties. The theory of highly molecular substances and their solutions has developed into an independent branch of colloid chemistry. The vitality of modern colloid chemistry is proved by the fact that it produces many new independent branches of science. Further, the author describes the course of the 4th All-Union Conference of Colloid Chemistry which took place in Tbilisi on May 13-16, 1958. It was organized by the Otdeleniye khimicheskikh nauk AN SSSR (Department of Chemical Sciences of the Academy of Sciences of the USSR) and the Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN SSR (Institute of Physical Chemistry of the Academy of Sciences of the USSR). The following reports were presented:

V. A. Kargin, Z. Ya. Berezinova described the synthesis of aluminum-silicon jelly of crystalline structure.

V. S. Tevzadze et al. examined the optical properties of macromolecular solutions and their structural peculiarities.

P. A. Rebinder and collaborators reported on questions of compatibility of polymers and their solutions.

V. A. Kargin, P. I. Zubov and collaborators discussed the process of gelatin formation and its role in sticking processes.

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S. E. Bresler, S. I. Meyerson referred to the coincidental results of thermochemical and dilatometrical examination methods of the transition of gelatine jelly into a liquid solution at a rise in temperature.

A. I. Turbanova and collaborators (L'vov), P. M. Khomikovskiy reported on the clarification of polymerization processes in the state of dispersion.

B. Ya. Tsengel'nik, M. Ye. Ya'in, S. S. Voyutskiy, A. P. Piscarev and collaborators examined the process of the influence of active fillers on the processes of structural formation of polymers.

A. V. Roman with his school, A. A. Trapeznikov, G. V. Vinogradov and collaborators examined the properties of soap solutions in connection with their structural peculiarities and the theory of consistent lubricants.

The reports on questions of dispersion systems in polymers showed the utility of a combination of problems of colloid chemistry and the physical chemistry of polymers. The results of the Conference indicate that, besides limited consultations on individual scientific problems, comprehensive congresses are also useful and necessary, uniting the investigators and comprising the results of achievements in wide fields of science. There is 1 Soviet reference.

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of spontaneous dispersion of solid bodies, especially metals, in surface-active surroundings.

V. I. Lishtvan reported on the appearance of adsorptive plastification of lead and tin at normal temperatures.

L. A. Kozarzhitskiy and collaborators examined the influence of rheological properties of printing colors on their behavior in the printing process.

I. E. Vigdorovich reported on the regulation of crystallization and coagulation structures in the production of best table-butter.

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MOROZOV, A.A. [Marozau, A.A.], prof.; MOLCHAN, Ye.P. [Molchan, E.P.]; MEYERSON, S.I. [Meerson, S.I.]

On the 60th birthday and 35th anniversary of the research, and pedagogic and public activities of Sergei Mikhailovich Lipatov. Vestsi AN BSSR.Ser.fiz.-tekh.nav. no.4:131-133 '59. (MIRA 13:4)
(Lipatov, Sergei Mikhailovich, 1899-)

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S/063/61/006/004/003/010
A057/A129

AUTHORS: Meyerson, S. I., Candidate of Chemical Sciences, Lipatov, S. M., Doctor of Chemical Sciences (deceased)

TITLE: Thermochemical methods for studying polymers

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D. I. Mendeleyeva, v. 6, no. 4, 1961, 412-416

TEXT: Literature data of the present authors and others on problems related to thermochemical investigations of polymers and facts influencing thermal effects of interaction of polymers with liquids were discussed. The effect of the phase and physical state of the polymer on the heat Q_1 of dissolving is demonstrated by the change of enthalpy ΔH of a system at: a) mixing two liquids, b) dissolving of glassy and c) of crystalline materials in liquids. In Fig. 1 composition of the solution is plotted versus ΔH. The curve abcd shows the change of ΔH in the formation of the solution per mole of solution, x_1 is the concentration of the formed solution and the segment ae the integral heat of mixing, respectively ak for one mole of the component at the concentration x_2. For the formation of an infinitely diluted solution Q_1 corresponds to

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Thermochemical methods for studying polymers

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ap. Thus Q_1 for the other component can be expressed by

$$- Q_1 = \Delta H_{2mix} = \left(\frac{\Delta H_{mix}}{x_1}\right) = \left(\frac{E_{1,1} + E_{2,2} + 2 E_{1,2}}{x_1}\right) \quad (1)$$

($E_{1,1}$ and $E_{2,2}$ = energy of intermolecular reaction of the first and second component in liquid state respectively, and ΔH = change in enthalpy per mole of solution). The vitrification enthalpy of the polymer is characterized by point G, and fusion enthalpy by a, thus $- Q_1 = \Delta H_2 = - \Delta H_v \pm \Delta H_{2mix}$ (2) (ΔH = H of the equilibrium melt - H of glass). Enthalpy of a crystalline polymer (point s) is lower than the enthalpy of the fusion (point a), hence $- Q_1 = \Delta H_2 = \Delta H_{melt} - \Delta H_{2mix}$ (3). It is demonstrated herewith that Q_1 depends on the phase and physical state of the polymer, the kind of the solvent and the properties of the resulting solutions. Investigations in the same solvent (ΔH_{2mix} = const.) permit the effect of various factors on the structure and packing density of polymers to be studied, since changes in enthalpy are determined by the change in enthalpy of the dissolved polymer. Increase or decrease of the heat of dissolving with the molecular weight of the polymer (observed by various authors) depends on the structure of the polymer. The effect of thermal treatment on the

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heat of dissolving of polymers was also described frequently in literature. It was suggested by L. I. Prokovskiy and A. B. Pakshver [Ref. 24: Vysokomol. soyed. 2, 1466 (1960)], and E. Kal've [Ref. 25: ZhFKh, 33, 1161 (1959)] to investigate the kinetics of the heat evolution (instead of the heat of dissolving in equilibrium) in studying changes in polymer structures after thermal treatments. A review of literature data concerning the influence of mechanical effects on the structure of polymers by investigating the dissolving heat is given by Yu. S. Lipatov [Ref. 27: Usp. khim., 26, 768 (1957)]. The present authors assume that a study of the heat of dissolving and not the heat of wetting (as suggested by different investigators) gives more accurate information on changes in the energy of intermolecular forces in polymers after mechanical deformations. The effect of flexibility of the macromolecule of the polymer on the heat of dissolving was studied on several copolymers by A. A. Tager and others [Ref. 46: ZhFKh, 32, 1362 (1958), Ref. 47: Koll. zh., 17, 315 (1955), Ref. 48: Koll. zh., 17, 391 (1955), Ref. 49: ZhFKh, 32, 1774 (1958)]. It is pointed out that the investigated copolymers have to be in the same physical state and according to observations made by S. M. Lipatov [Ref. 51: Vysokomol. soyed., Izd. AN BelorussSSR, 1943, Ref. 52: Problemy ucheniya o liofil'nykh kolloidakh (Problems in studying lyophilic colloids), Minsk (1941)] also the

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duo-philic nature of the macromolecule (polar and apolar groups) must be considered. In studying the effect of the solvent's nature on the heat of solvation, solution or dissolving the influence of association of the polymer in solution has also to be considered. The value of the amount i ∞ of the solvent reacting with the polymer under formation of heat determined by the thermochemical method is in good agreement with data obtained by other methods presented by Ye. F. Nekrach [Ref. 60: Dissertation, Kiyev, 1954]. According to Fig. 1 the integral dissolving heat depends on the final concentration of the polymer in solution. The present authors state that conclusions presented by A. A. Tager et al [Ref. 47: Koll. zh., 17, 315 (1955) and Ref. 79: Koll. zh., 17, 69 (1953)] related to the change in entropy ΔS and enthalpy ΔH effected by the reaction of polymers with liquids have to be accepted with reserve, considering results presented by G. V. Schulz and H. Horbach [Ref. 87: Z.phys. Chem., 22, 37 (1959)]. Investigations by G. V. Struminskiy and G. L. Slonimskiy [Ref. 88: ZhFKh. 30, 1941 (1956)] on compatibility of polymers demonstrated that for the mixing of some polymers with flexible chains $\Delta S = \emptyset$, while $\Delta H < 0$ and $\Delta G = \Delta H$ can be considered as criterion for compatibility of polymers. The effect of temperature on the heat Q of dissolving is important for studying the structure of polymers, jellies and solutions. The present authors showed

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Thermochemical methods for studying polymers

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[Ref: 90: Koll. zh., 8, 143 (1946)] the influence of temperature on Q. Glassy polymers with loose structure have a positive value Q which decreases with increasing temperature according to investigations of the present authors [Ref. 44: Koll. zh., 18, 477 (1956)]. Decrease of the heat effect with increasing temperature was explained by decreasing heat of vitrification [Ref. 91: Koll. zh., 21, 530 (1959)]. By studying the temperature dependence of Q the effect of phase and physical state of the polymer on Q can be determined and also the energy of intermolecular forces in jellies and solutions of polymers, the mechanism of jelly-formation and the effect of thermal, mechanical or radiation effects on changes in polymer structure. There are 2 figures and 92 references: 31 non-Soviet-bloc and 61 Soviet-bloc.

Fig. 1:

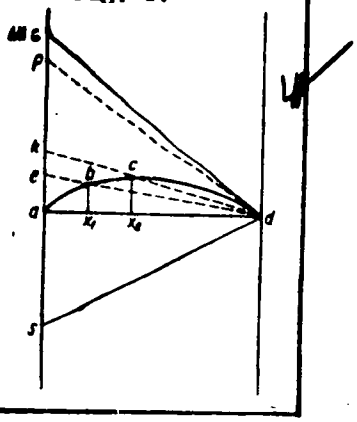

Fig. 1: Schematic drawing of the dependence of change in enthalpy at the mixing of two components in different physical and phase states.
Legend: See text.

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S/069/61/023/002/008/008
B101/B208

AUTHORS: Dogadkin, B. A., Kargin, V. A., Meyerson, S I . Rogovin, Z A

TITLE: In Memory of Sergey Mikhaylovich Lipatov (Deceased)

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 2, 1961, 238-239

TEXT: This article is devoted to S. M. Lipatov, an expert in the field of colloid chemistry and physical chemistry of polymers, who died on January 8, 1961 At various institutes he organized laboratories for high-molecular compounds. In particular, he established the laboratoriya iskusstvennogo volokna im. Nauchno-issledovatel'skiy institut im. Karpova (Laboratory of Synthetic Fibers of the Scientific Research Institute imeni Karpov), now the Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers). In the Soviet Union, Lipatov was the first to lecture on high-molecular compounds and the physical chemistry of dyeing. He was a university teacher for 30 years. Mention is made of his monographs "Fiziko-khimicheskiye osnovy krasheniya" ("Physico-chemical basis of dyeing") (1929); "Vysokomolekulyarnyye

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In Memory ...

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soyedineniya" (High-molecular compounds) (1934 and 1943), "Problemy ucheniya o vysokopolimerakh" (Problems of high-polymer research) (1941). Lipatov took part in conferences on colloid chemistry, and was for many years a member of the editorial board of "Kolloidnyy zhurnal" and of the nauchno-tekhnicheskiy sovet Ministerstva pishchevoy promyshlennosti (Scientific and Technical Council of the Ministry of Food Industry). Considerable organizing work was done by Lipatov at the Akademiya nauk BSSR (Academy of Sciences BSSR) as Academician and Vice President. There is 1 figure.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

S/069/63/025/002/007/010
A057/A126

AUTHORS: Meyerson, S.I., Zagrayevskaya, I.M.

TITLE: Thermochemical and dilatometric investigations of crystallizable polymer gels

PERIODICAL: Kolloidnyy zhurnal, v. 25, no. 2, 1963, 197 - 201

TEXT: S.I. Meyerson investigated in earlier works (Koll. zh., v. 18, 1956, 447; v. 20, 1958, 353; and v. 21, 1959, 613) gelatine gels and considered their melting process as phase transition. It was of interest to investigate the effect of the structure of the initial polymer (crystalline, or amorphous) and its crystallizability on the properties of the gels formed, their phase condition, and the character of gel-solution transition. In the present paper results are given of thermochemical and dilatometric studies of polyvinyl alcohol, fluoro-polymer ("ftorlon"), and polyacrylonitrile gels. Conclusion: Gels prepared from crystallizable polymers contain independently from the preparation method (swelling in poorly dissolving solvents, or by gelatinization of solutions) secondary crystallites which determine the phase condition, the prop-

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Thermochemical and dilatometric investigations S/069/63/025/002/007/010
A057/A126

erties of the gel, and the character of phase transition gel-solution. There are 5 figures and 2 tables.

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute).

SUBMITTED: November 28, 1961

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, S.I.; ZAGRAYEVSKAYA, I.M.; BARSKIY, Yu.P.

Temperature dependence of the heat capacity of amorphous and crystallizing polymer gels. Koll.zhur. 26 no.1:141-142 Ja-F '64. (MIRA 17:4)

1. Moskovskiy tekstil'nyy institut.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Samuil Isdovich; CHASTOYEDOV, L.A., inzh., retsenzent; MARENKOVA, G.I., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Electrical engineering and power supply sources] Elektrotekhnika i istochniki pitaniia ustroistv STsB i sviazi. Izd.2., perer. i dop. Moskva, Transzheldorizdat, 1963. 403 p. (MIRA 16:10)

(Railroads--Signaling--Centralized traffic control)
(Railroads--Communication systems)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

KEYNERSON, S.M.

Organizing the work of measuring units in the central telephone station. Vest. sviazi 7 no.8:7-8 Ag '47. (MLRA 9:1)

1.Glavnyy inzhener Kuybyshevskoy meshdugorodnoy telefonnoy stantsii.
(Kuybyshev Province--Telephone) (Electric measurements)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Samuil Yudovich; SADOV, I.Ya., inzhener, redaktor; YUDZON, S.M., tekhnicheskiy redaktor

[Automatic locomotive signalling and automatic stops] Avtomaticheskaia lokomotivnaia signalizatsiia i avtostopy. Moskva, Gos. transportnoe zhel-dor. Izd-vo, 1955. 130 p. (MLRA 8:6)
(Railroads--Automatic train control)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

KANTOR, L.A., inzh.; MEYERSON, V.D., inzh.

Automatic distribution device of compressed air of high pressure. Khim. i neft. mashinostr. no.6:34-35 D '64 (MIRA 18:2)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEZERSON, V.D.; CHIZHOV, F.F.

Four-section sifter with rotating blades for the free-flowing ingredients of rubber compounds. Kauch. i rez. 24 no.4:45-46 Ap '65. (MIRA 18:5)

1. Zavod "Krasnyy bogatyr'".

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, V.G.

The most recent foreign innovations in the field of drilling. Razved. i okh. nedr 22 no.9:57-59 S '56. (MLRA 9:11)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Boring)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON V.P.

ANTONOV, Stepan Petrovich; MEYERSON, Vladimir Pavlovich; MATLIN, G.M., red.; ANDREYEVA, L.S., red.izd-va; LAVRENOVA, N.B., tekhn.red.

[Computing installations with high pile grating] Raschet sooruzhenii s vysokim svainym rostverkom. Moskva, Izd-vo "Morskoi transport," 1957. 158 p.

(Piling (Civil engineering)) (MIRA 11:3)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

AUTHOR: Meyerson, Ya. A.

TITLE: On the Problem of the Development of the Abstraction and Generalization Function (K voprosu o razvitii funktsii otvlecheniya i obobshcheniya)

SOV/20-122-1-43/44

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 156-159 (USSR)

ABSTRACT: The utilization of general ideas for the analysis of the environmental manifestations is one of the characteristics of the generalization function of the second signal system. I. P. Pavlov qualified the ideas as the general complexes of the 2. signal system and repeatedly pointed to their important role in the process of perception. This role, however, is still but little investigated by physiologists. The author studied the functional importance of general notions under various experimental conditions in children of 3, 5, and 7 years of age. The differences of the experimental conditions were that apart from direct also verbal stimuli were applied to the test persons, further, that the investigation was performed both by the formation of a selective-generalized reflex and differentiation and, on the other hand, by a natural experiment. After

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the author had ascertained that this or that notion was existing in the vocabulary of the children, he elaborated, on the basis of an affirmation by speech, a number of reflexes upon stimuli, referring to one single idea, for instance "clothing"; several differentiations, referring to some other notions, for instance "table-utensils", were developed. For each child, such systems were worked out with regard to pictures representing objects, and with regard to verbal stimuli. With some children, the system was primarily directed to direct, with others to verbal stimuli. After several reflexes and differentiations had been worked out with the children, most of them started to react promptly on new stimuli. This was regarded by the author as an index of the formation of a selective-generalized reflex and differentiation (Fig 1, A,B). Figure 2 shows that the number of the adequate reactions on verbal notions increases in proper relation to the age. But only with children of 7, the reactions on verbal stimuli were always correct. In all groups of age the report on the system of verbal stimuli was more perfect than the report on that of direct stimuli. The results prove that the utilization of general ideas for the elaboration of a selective-

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

generalized reflex and differentiation is more accessible to the children than an adequate reaction on these ideas. Least accessible to the children is the task at which the principle of the systemization is to be stated, with other words, to denominate in the report these ideas, on the basis of which the systemization had been performed. In the natural experiment, none of the children of 3 was able to classify the pictures. They were not able to overcome this problem before the experimenter himself initiated it. Only children of 7 were in the most cases able to classify correctly. These facts prove that there is often no relation between the existence of this or that general idea in the speech of a child and its practical meaning.

There are 2 figures.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute of Evolutional Physiology imeni I. M. Sechenov, AS USSR)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ya. A.: Master Med Sci (diss) -- "On the interaction of the signal systems in healthy children and oligophrenic children at various stages of speech development". Leningrad, 1959. 23 pp (Leningrad Pediatric Med Inst), 250 copies (KL, No 17, 1959, 111)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ya. A. Cand Biol Sci -- "On the development of interactions of signal systems." Len, 1960 (Len State Ped Inst im A. I. Gertsen. Chair of Anatomy and [redacted] Physiology). (KL, 1-61, 122)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ya. A., Cand Med Sci -- (diss) "Development of the interaction of signal systems in children." Moscow, 1960. 18 pp; (Academy of Sciences USSR, Inst of Higher Nervous Activity); 200 copies; free; (KL, 26-60, 143)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

KAYDANOVA, S.I.; MEYERSON, Ya.A.

Characteristics of the activity of the auditory analyzer in aphasia. Zhur. vys. nerv. deiat. 11 no.4:602-608 Jl-Ag '61. (MIRA 15:2)

1. Sechenov Institute of Evolutionary Physiology, U.S.S.R. Academy of Sciences, and Chair of Nervous Diseases, Kirov Military Medical Academy, Leningrad.
(CONDITIONED RESPONSE) (HEARING) (APHASIA)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

TRAUGOTT, N.N.; KAYDANOVA, S.I.; MEYERSON, Ya.A.

Impairments of motor functions on the side of the injured hemisphere and possible mechanism of these impairments. Acta nerv. sup. (Praha) 6 no.4:384-396 '64.

1. Institut evoluytsionnoy fiziologii im. I.M. Sechenova, AN SSSR i Psikhonevrologicheskiy institut im. V.M. Bekhtereva, nevrologicheskoye otdeleniye, Leningrad.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ya.S.

Dermoid cyst of the greater omentum. Sov.med. 23 no.1:131 Ja '59. (MIRA 12:2)

1. Zaveduyushchiy khirurgicheskim otdeleniyem Neksikanskoy rayonnoy bol'nitsy (glavnyy vrach A.D. Ostapchuk) Magadanskoy oblasti.
(OMENTUM--TUMORS) (CYSTS)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON YE. G.

USSR/Medicine - Hygiene and Sanitation
Societies, Medical Jul 50

"Scientific Session of the Uzbekistan Institute of Sanitation and Hygiene Jointly With the Uzbekistan Scientific Society of Hygienists," Ye. G. Meyerson, L. B. Shrayber, I. G. Urbakh

"Gig i San" No 7, pp 54-56

Outlines program of session 22 - 24 Feb 50, at the Institute when reports covering wide range of subjects in the field were presented. Housing

PA 170T68

USSR/Medicine - Hygiene and Sanitation (Contd) Jul 50

standards, water supply, silicosis, industrial hygiene, helminthiasis, food sanitation, and development of various fields over past 25 years were among subjects on which reports were submitted.

170T68

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

USSR/Geological Prospecting Sep/Oct 1947
Drilling Machinery

"Equipment for Geological Survey Drilling," E. G. Meyerson, F. D. Karyagin, G. N. Borodin, 4 pp

"Razvedka Nedr" No 5

Describes a system of mechanical drilling for geological surveying of likely areas to be worked. Presents a picture of a truck equipped with a mechanical drill capable of going down to a depth of 75 meters. It was developed by the Vorovskiy Factory in 1947.

LC 27T35

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

VETERSON, YE. G.

Demography

Discussion of some problems on the geography of population in the Moscow branch of the Geographic Society of the USSR and in the Moscow State Pedagogical Institute. Izv. AN SSSR. Ser. geog. no. 3:87-90 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952 UNCLASSIFIED.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

USSR/ Geography - Economic geography

Card 1/1 Pub. 45 - 17/17

Authors: Meyerson, Ye. G.

Title: [redacted]
Problems of the economic geography of Central Asia in the theses of candidates of the Geographical Institute of the Acad. of Sci. of the USSR

Periodical: Izv. AN SSSR. Ser. geog. 3, 110-112, May - Jun 1954

Abstract: A brief description is given of the nature of some of the theses presented to the Geographic Institute of the Academy of Sciences of the USSR by candidates for academic degrees. Many of these theses dealt with the physical and economic geography of the regions of Central Asia, such as the Republics of Kirgiz, Turkmen and Tadzhik, with particular emphasis on the possibilities of producing more economic goods for the country as a whole.

Institution: .....

Submitted: .....

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ye.G.

Drilling for water using the reverse circulation system (from "Water and water engineering," June, 1956). Razved.i okh.nedr 22 no.12:58 D '56. (MLRA 10:2)

1. Tekhnicheskoye upravleniye Ministerstva geologii i okhrany nedr SSSR.

(Boring)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6

MEYERSON, Ye.G.

Contemporary small diamond core bits ("Diamond drill handbook" by Cumming. Reviewed by E.G. Meerson). Razved.i okh.nedr 23 no. 3:64 Mr '57. (MLRA 10:5)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Diamonds, Industrial) (Cumming)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720018-6"