"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

PARIN, V.V.; MEYERSON, F.Z.

Role and problems in experimental cardiology. Vest.AMN SSSR 16 no.5:5-12 '61. (MIRA 14:12)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. (CARDIOLOGY)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

KROKHINA, Ye.M.; MEYERSON, F.Z.; MIKOELYAN, A.L.

Dynamics of morphological changes in the intramural neural apparatus in compensatory hyperfunction of the heart. Biul. eksp. biol. i med. 52 no.10:115-118 O '61. (MIRA 15:1)

1. Iz laboratorii neyrogistologii imeni B.I.Lavrent'yeva (zav. - prof. Ye.K. Plechkova) i laboratorii fiziologii i patofiziologii serdechnoy deyatel'nosti Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V.Parin) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.

(HEART--INNERVATION)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; PSHENNIKOVA, M.G.; RAMENSKAYA, G.P.; CHERNYSHEVA, G.V.

Experimental prophylaxis of some changes developing in the myocardium during chronic heart failures. Dokl. AN SSSR 141 no.2: 509-512 N '61. (MIRA 14:11)

1. Institut normal'noy i patologicheskoy fiziologii Akademii meditsinskikh nauk SSSR. Predstavleno akademikom L.S.Shtern.
(HEART FAILURE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z., MANUKHIN, B.N., PSHENNIKOVA, M.G., ROZANOVA, L.S.

3

"On the intermediate metabolism of the myocardium in compensatory hyperfunction and hypertrophy of the heart."

Report submitted, but not presented at the 22nd International Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

PARIN, V.V.; MEYERSON, F.Z.;

[Myocardial tension and the functional reserve of the heart] Napriazhenie miokarda i funktsional'nyi rezerv serdtsa; materialy doklada na konferentsii in-ta 14-15 iiunia. Moskva, In-t normal'noi i patologicheskoi fiziologii, 1962. 21 p. (MIRA 15:7)

(HEART--MUSCLE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; MIKAELYAN, A.L.; MARKOVSKAYA, G.I.;

Function of the right ventricle of the heart under conditions of progressing stress on the left ventricle and left ventricular insufficiency. Zhur. eksp. i klin. med. 2 no.6:3-13 '62. (MIRA 18:10)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR i Institut kardiologii i serdechnoy khirurgii AN ArmSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.

Senile changes developing in the myocardium under the influence of cardiac hyperfunction and their experimental prevention. Zhur. ob. biol. 23 no.2:114-118 Mr-Ap '62. (MIRA 15:5)

1. Institute of Normal and Pathological Physiology, U.S.S.R.
(HEART—MUSCLE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; DMITRIYEVA, T.M.

Effect of cardiac hyperfunction on the establishment of the negative chronotropic effect of the vagus nerve. Dokl.AN SSSR 145 no.5:1184-1187 '62. (MIRA 15:8)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.
(VAGUS NERVE) (HEART)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; MONAYENKOV, A.M.

Anticardiac autoantibodies in cardiac hypertrophy. Dokl.AN SSSR 145 no.6:1421-1423 Ag '62. (MIRA 15:8)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.
(ANTIGENS AND ANTIBODIES) (HEAT FAILURE)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.

[Interrelationship of the physiological function and the genetic apparatus of the cell] O vzaimosviazi fiziologicheskoi funktsii i geneticheskogo apparata kletki; materialy doklada na konferentsii instituta. Moskva, In-t normal'noi i patologicheskoi fiziologii AMN SSSR, 1963. 91 p.

(CYTOLOGY) (MIRA 16:6)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; MIKAYELYAN, A.L.; SHENDEROV, S.M.; MARKOVSKAYA, G.I.

Dynamics of stress in the myocardium in compensatory hyperfunction and insufficiency of the heart from overwork.
Zhur. eksp. i klin. med. 3 no.4:13-23 '63. (MIRA 16:12)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR i Institut kardiologii i serdechnoy khirurgii AN Armyanskoy SSR.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; MARKOVSKAYA, G.

Energy transformation in the heart. Cor vasa 5 no.2:81-89 '63.

1. Institute of Normal and Pathological Physiology, Academy of Medical Sciences, Moscow.
(ENERGY METABOLISM) (MYOCARDIUM) (HEART)
(AORTIC STENOSIS)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; BELOSHAPKINA, T.D.; LUSHNIKOV Ye.F.; LEYKINA, Ye.M.; MARKOVSKAYA, G.I.; CHERNYSHOVA, G.V.

Function, structure and protein metabolism of hypertrophied myocardium. Vestn. Akad. med. nauk SSSR 18 no.7:27-37 '63 (MIRA [illegible])

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. I. Moskovskiy ordena Lenina meditsinskiy institut imeni I.M. Sechenova. Institut eksperimental'noy biologii AMN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

KROKHINA, Ye.M.; MEYERSON, F.Z. (Moskva)

Dynamics of cholinesterase activity in the neural apparatus of the heart and myocardium in compensatory hyperfunction and hypertrophy. Arkh. pat. 25 no.8:34-37 '63 (MIRA 17:4)

1. Iz laboratorii neyrogistologii imeni B.I. L[redacted]t'yeva (zav. - prof. Ye.K. Plechkova) i laboratorii fiziologii i patologii serdtsa (zav. - deystvitel'nyy chlen AMN SSSR. V.V.Parin) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR V.V. Parin).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; LEYKINA, Ye.M.; BELOSHAPKINA, T.D.

Interrelation between the physiological function and genetic apparatus of a cell. Dokl.AN SSSR 149 no.3:700-702 Mr '63. (MIRA 16:4)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.

(Heart—Muscle) (Cell metabolism) (Nucleic acids)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; SADOVSKAYA, L.Yu.; POGOSYAN, L.A.

Blocking role of sulfhydryl groups in the mechanism of the action of cardiac glycosides. Dokl. AN SSSR 150 no.3:702-704 My '63. (MIRA 16:6)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR. Predstavleno akademikom A.N. Bakulevym.
(Cardiac glycosides)
(Mercapto group)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; MALOV, G.A.; PSHENNIKOVA, M.G.; KALEBINA, N.S.

Correlation in the intensity of synthesis and the breakdown of protein in the myocardium in heart hyperfunction. Dokl. AN SSSR 154 no. 3:738-741 Ja '64. (MIRA 17:5)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR i Institut serdechno-sosudistoy khirurgii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; ZALETAYEVA, T.A.; LAGUCHEV, S.S.; PSHENNIKOVA, M.G.

Correlation of the mass of energy-producing and functioning structures in the adaptation process of the differentiated cell to a prolonged increase in functional level. Dokl. AN SSSR 157 no.3:668-671 Jl '64. (MIRA 17:7)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR i Institut eksperimental'noy biologii AMN SSSR. Predstavleno akademikom A.N. Belozerskim.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, [illegible] [illegible]AN VA, L.S.

Effect of changes in mediator metabolism on the development [illegible] heart hypertrophy. Biul. eksp. biol. i med. [illegible] '64.

[illegible]

1. Institut normal'noy i patologicheskoy fizio[illegible] [illegible] vitel'nyy chlen AMN SSSR prof. V.V. Parin. AMN SSSR, Moskva

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

KROKHINA, Ye.M.; MEYERSON, F.Z.

Dynamics of the content of nucleic acids in intramural nodal neurons in compensatory hyperfunction of the heart. Trudy Inst. norm. i pat.fiziol. AMN SSSR 7:55-56 '65. (MIRA 18:6)

1. Laboratoriya neyrogistologii (zav. - Ye.K.Plechkova) i laboratoriya fiziologii i patologii miokarda (zav. doktor med. nauk F.Z.Meyerson) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

CHERNYSHEVA, G.V.; MEYERSON, F.Z.

Dynamics of the enzymatic activity of myocardial myosin in compensatory cardiac hyperfunction. Vop. med. khim. 11 no.2:17-20 Mr-Ap '65. (MIRA 18:10)

1. Laboratoriya biokhimii i laboratoriya fiziologii i patologii serdechnoy deyatel'nosti Instituta normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

FEL'DMAN, S.B.; MEYERSON, F.Z.; MARKOVSKAYA, G.I.; [illegible]
KHIL'KIN, A.M.

Comparative studies on the duration of systole [illegible] intracardiac hemodynamics in progressive experimental [illegible] diseases. Kardiologiia 5 no.2:28-31 [illegible]

1. Propedevticheskaya terapevticheskaya klinika [illegible] deystvitel'nyy chlen AMN SSSR prof. V.Kh.Vasilenko [illegible] Moskovskogo meditsinskogo instituta imeni [illegible] i laboratoriya fiziologii i patologii serdtsa instituta normal'noy i patologicheskoy fiziologii (direktor - deystvitel'nyy chlen AMN SSSR prof. V.V.Parin) [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

PARIN, Vasiliy Vasil'yevich; MEYERSON, Feliks Zal'manovich; SHENDEROV, S.M., red.

[Studies on the clinical physiology of blood circulation] Ocherki klinicheskoi fiziologii krovoobrashcheniia. Moskva, Meditsina, 196[illegible]. [illegible] p. (MIRA 18:8)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

SPIRICHEV, V.B.; MEYERSON, F.Z.; D'YACHKOV, L.V.; BLAZHEYEVICH, N.V.

Effect of compensatory hyperfunction and hypertrophy of the heart on the content of vitamins B_1, B_2 and B in the myocardium and liver in rabbits. Vop. med. khim. 11 no.2:54-59 Mr-Ap '65. (MIRA 18:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut vitaminologii Ministerstva zdravookhraneniya SSSR i Institut normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.

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L 34187-66 EWT(1)/T JK

ACC NR: AP6026015 SOURCE CODE: UR/0247/66/016/002/0274/0291

AUTHOR: Meyerson, F. Z. (Moscow); Kruglikov, R. I. (Moscow)

ORG: none

35
B

TITLE: Interrelationship of the genetic apparatus with the physiological function of the neuron as a factor in the mechanism of conditioned reflexes and memory

SOURCE: Zhurnal vysshey nervnoy deyatel'nosti, v. 16, no. 2, 1966, 274-291

TOPIC TAGS: conditioned reflex, neuron, animal physiology, animal genetics, RNA, DNA, cytology, biologic metabolism

ABSTRACT: In the course of this survey of the pertinent published literature it is established that the reinforcement of new conditioned reflexes requires an adequate synthesis of RNA on DNA templates whereas, on the other hand, previously established firm reflexes may persist fairly long despite the inhibition of DNA-dependent synthesis of RNA. On the basis of experiments with the effect of the inhibition of protein synthesis on conditioned reflexes and memory, involving the use of the antibiotic puromycin, which inhibits the transport of amino acids and ribosomes and disturbs their protein synthesis, it is established that intracerebral administration of ribonuclease leads to the same effects as the administration of puromycin -- the destruction of the developed conditioned reflexes. An analysis of the findings of various investigators on the role of nucleic acid synthesis in the mechanism of conditioned reflexes and memory gives considerable reason to beilieve that the realization of intra-neuron interrelationship between the genetic apparatus of the cell and the cell's function plays a decisive role in the formation of inter-neuron connections as well as in the formation of the multi-neuron systems representing the structural basis for the reinforcement of conditioned reflexes and memory. The tests were carried out at the Laboratory of Neuroradiology headed by Professor I. A. Pionkovskiy, Institute of Higher Nervous Activity and Neurophysiology, AN SSSR. [JPRS]

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Card 1/1 UDC: 612.833.81

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

RUBEL', V.M.; APANASYUK, M.P. [deceased]; MEYERSON, F.Z.

Metabolism of myocardial substances in compensatory hyperfunction of the heart. Myocardial carbonic anhydrase activity in compensatory hyperfunction and hypertrophy of the heart. Vop. med. khim. 9 no.1:57-60 Ja-F '63. (MIRA 17:6)

1. Laboratoriya fiziologii i patofiziologii serdechnoy deyatel'nosti i laboratoriya biokhimii, Institut normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MIKAYELYAN, Aleksandr L'vovich. Prinimal uchastiye MEYERSON, F.Z., doktor med. nauk; GRIGORYAN, E.A.; KYANDARYAN, K.K., doktor med.

[Clinical pathophysiological changes in stenosis of the left atriventricular opening of the heart and its surgical correction] Kliniko-patofiziologicheskie izmeneniia pri suzhenii levogo atriventrikuliarnogo otverstiia serdtsa i khirurgicheskaia korrektsiia ego. Erevan, Aiastan, 1964. 265 p. (MIRA 18:6)

1. Direktor Instituta kardiologii i serdechnoy khirurgii AMN SSSR (for Kyandaryan).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MAYZELIS, M.Ya.; BAZARDZHYAN, A.G.; MEYERSON, F.Z.

Use of the products of glucose decomposition in protein synthesis following the compensatory hyperfunction of some organs. Dokl. AN Arm. SSR 39 no. 3:181-186 '64. (MIRA 18:1)

1. Institut normal'noy i patalogicheskoy fiziologii AMN SSSR. Predstavleno akademikom AN ArmSSR G.Kh.Bunyatyanom.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, F.Z.; POGOSOVA, A.V.

Incorporation of labeled amino acids into the total proteins and proteins of myocardial nuclei in compensated hyperfunction and hypertrophy of the heart. Vop. med. khim. 8 no.6:621-624 N-D '62. (MIRA 17:5)

1. Institut khirurgii imeni A.V. Vishnevskogo AMN SSSR i Institut normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

PARIN, V.V.; MEYERSON, F.Z.

Myocardial stress and functional reserve of the heart in hyperfunction and insufficiency. Vest. AMN SSSR 18 no.2: 20-32 '63. (MIRA 17:7)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

1950-1957

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, Prof. Grigoriy Abramovich

Dr. Technical Sci. Prof. Moscow Inst. Nonferrous Metals Goldim. M. I. Kalinin, 1948 Ch. Engr., Main Admin. Rare Metals Ind., -1935-; Docent Bur. Hard Alloys, -1935-. "Review of M. Yu. Bel'shin's Book 'Powdered Metal Studies'," Stal'. No. 7, 1948. Stalin 2nd Prize, 1945, tantal an. tantalic alloy; Stalin 3rd Prize, 1947, hard alloys.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

Hard alloys from tungsten and molybdenum carbides. G. A. Meerson. Russ. 18,476, Aug. 31, 1930. Powd. W and Mo carbides are pressed and heat-treated in the presence of a binder consisting of an alloy of Co and W obtained by mixing solns. of $NH_4H_2WO_4$ and $Co(NO_3)_2$ with the addn. of the hydrate of tungstic acid, concg. by evapn. to sirupy consistency, agitating for a number of hrs. in a porcelain mill, drying, heating to 750-850°, disintegrating and reducing in a H_2 atm. at red heat.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

Pure ferrotungsten from wolframite through ferrous tungstate G. A. Meerson

J. Applied Chem (U. S. S. R.) 4, 201-14(1931). Lab. data show possibilities for the following process: Wolframite $\xrightarrow{\text{(fusion with } Na_2CO_3)}$ Na_2WO_4 $\xrightarrow{\text{(pptn. with } FeSO_4 \text{ or } FeCl_3)}$ $FeWO_4$ (reduction with C, etc.) $\longrightarrow$ FeW

V. Kalichevsky

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

1a

Hard alloys G. A. Meerson. Russ 30,438, July 31, 1933. Addn. to Russ [illegible] preceding abstract). The method is different from that protected by Russ [illegible] in that W is replaced by any of the high melting metals of the fifth group of metals of the periodic system.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

Composition for brazing working surfaces to tools G. A. Meerson and R. L. Veller. Russ. 43,73[illegible], July 31, 1935. A mixt. of oxides of at least two of the metals Mo, Ti, W, V, Cr, Nb, Ta and Mn with the required amount of C is subjected to the alumino-thermal reduction, powdered, and mixed with the amt. of an organic cementing substance and carbon required for the formation of carbides in the boring process.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND GROUPS

3RD AND 4TH GROUPS

PROCESSES AND PROPERTIES INDEX

M

†**Carbides of High-Melting Point Metals.** G. A. Meerson (*Redkie Metally* (*Rare Metals*), 1955, (4), 6–20).—[In Russian.] Gives a detailed review of the literature on the properties of titanium, zirconium, hafnium, thorium, vanadium, niobium, tantalum, molybdenum, and tungsten carbides, and a review of the work carried out under M.'s guidance on the conditions for obtaining titanium carbide and on its properties.—D. N. S.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

M

2

"Influence of an Excess of Tungsten on the Properties of the Alloy Pobedit and Substitution of Cobalt by Nickel. G. A. Meerson, A. N. Korolkov, M. M. Babich, and L. P. Nevskaia (*Legkie Metally* (*Light Metals*), 1938, (3), 38–46). [In Russian.] Addition of tungsten to cobalt-tungsten carbide alloys increases the hardness and improves their cutting properties. Substitution of tungsten for 10% of cobalt increases the bending strength from 155 to 158 kg. mm.^{2}, but further additions reduces it to 126 kg. mm.^{2} at 25% tungsten, and the alloy is rendered more porous. For cutting without impact an addition of up to 25% tungsten may be used, but for surface stripping the permissible maximum is 11%. Sintering at 1400° C. in hydrogen gives the best results. Addition of tungsten to the corresponding nickel alloys also has a beneficial effect, the best properties being obtained when the free tungsten content is 15% of the nickel content, *e.g.* the alloy with tungsten carbide 91·4, nickel 7·30, and tungsten 1·30%. The cutting properties of the nickel alloys are as good as, and in some cases better than, those of the cobalt alloys. — D. N. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

The influence of excess tungsten on Pobedit and substitution of nickel for cobalt G. A. Meyerson, A. M. Korol'kov, M. M. Babich and L. P. Nevskaya. *Redkie Metal* 9, No. 3, 38-40(1930). W-C alloys were prepd with Co-W alloys contg. 0.25% W or Ni-W alloys contg 0.42% W as binders. The addn. of W to the binder increased the hardness and improved the cutting properties. D. and strength increased up to about 10-15% W and then decreased. H. W. Rathmann

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

Hard alloys with a complex carbide component G. A. Meerson. Russ. 20,245, Dec. 31, 1930. Powd. oxides or salts not reducible by H (e. g., of Ti or Zr) and oxides or salts that are easily reduced by H (e. g., W or Mo) are heated with C. The reduction and carburization are accelerated by introducing into the original mixt. at least two oxides or salts that can be reduced by H but do not form carbides (Cu, Ag, Co, Ni). The metals of the Fe group in this addn. must not exceed 5% (by vol.) with respect to the carbide formed, while Cu or Ag must not exceed 5% (by vol.) with respect to all the cementing metals in the alloy.

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

4

Making titanium carbide. G. A. Meerson and Ya. M. Lipkes. *J. Applied Chem* (U. S. S. R.) 12, 1759-67(in French, 1708)(1939).—TiO_2 was heated for 0 to 4 hrs. to 1700-1900° in an atm. of H with C of various types, such as lampblack, carbon black and sugar carbon. Upon gradually heating the mixt. up to 1300 or 1400° and then up to 1800 to 1900° a "titanium carbide" was produced with a combined-C content of 18-18.5%. For the prepn of the best fine-grained Ti carbide expose the mixt. to the above max. temp. for only a short time. The C diffuses into the solid phase rapidly at these temps. A. A. B.

COMMON ELEMENTS

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OPEN

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

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MEYERSON4G8A8

600

1. MEYERSON, G.A., ZVEREV, G.O., ZUPKOVA, F.M.

2. USSR (600)

Moscow Institute of Fine Chemical Technology, "Study of the Solubility of Complex Tantalum Fluride and Niobium Fluoride", Tsvet. Met. 14, No 8, August 1939

9. [redacted]-Report U-1506, Oct. 4, 1951

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

1ST AND 2ND ORDERS

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9

C1

Physico-mechanical properties of hard alloys of the "Pobedit" type in relation to chemical composition and heat treatment. G. A. Meerson and V. I. Shabalin. *Tsvetnye Metal.* 1949, No. 3, 77-85.—An investigation was made to det. the influence of various methods of manufg. WC-Co alloys ("Pobedit" type) with varying Co content on their phys., mech. and cutting properties. It was established that: (1) Max. hardness, which increases with decreasing Co content, max. toughness, which increases with increasing Co content, and optimum cutting properties (on cast iron) of the alloys with the Co content of 4 to 13% are obtained at 1450° sintering temp.; (2) at this temp. the sintering of medium size articles can be completed in 45 min.; (3) increasing the temp. above 1450° results in grain growth and impairment of the properties; (4) the best cutting properties (on cast iron) are obtained in alloys with 4 to 6% Co.; and (5) reheating of hot pressed alloys at the same temp. is beneficial, as it improves the soundness and refines the grain. 4 references.

B. N. Daniloff

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

Behavior of titanium carbide in hard alloys G. A. Meerson, G. L. Zverev and B. E. Osinovskaya *J. Applied Chem.* (U. S. S. R.) 13, 66-75 (in German, 75) (1940). Ti carbide contg. 19.2% C and a small amt. of residual O was obtained at 1420° and 0.14 mm. pressure. It was more granular than ordinary commercial prepns. because of the low temp. of formation. The best carbide for use in sintered alloys is low in O. The better the quality of TiC, the higher is the degree of penetration of fused Co. A. A. Podgorny

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CA

9

The oxidation refining of antimony. G. A. Morozov, I. Ya. Krol and O. E. Krefts. *J. Applied Chem.* (U.S.S.R.) 13, 323-8(in French, 329)(1940). The admixts. of As and Fe can be removed from Sb by blowing air through the molten metal in the presence of soda slag, under the following optimal conditions: temp. 650°, velocity of air passing through molten metal 500 cc./min. per kg. of metal, two changes of slag each amounting to 50% of soda and duration 1 hr. per change of slag (total 2 hrs.). The yield of refined Sb was 80.5% of 99.8% purity. 8.75% of Sb was absorbed in slag and 1.75% was evapd. as Sb_2O_3. The presence of soda was necessary for a more complete removal of Fe and especially of As.

A. A. Podgorny

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1ST AND 2ND ORDERS

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Ca

9

Reduction of the oxides of metals of high melting points with calcium hydride. G. A. Meerson, G. A. Katz and A. V. Khokhlova. *J. Applied Chem.* (U. S. S. R.) 13, 1770-6(in French, 1770)(1940). TiO_2, V_2O_5, Cb_2O_5 and Ta_2O_5 were reduced with CaH_2 in H at atm. pressure in elec. furnaces. The most favorable conditions were: for TiO_2 950-1075°, for V_2O_5 1025-1175°, for Cb_2O_5 950-1075° (in all of the above cases a 50% excess of the 80-90% CaH_2), and duration of heating 45 min. to 1 hr.; for Ta_2O_5, heating with 40% CaH_2 obtained by heating to incandescence CaO + Mg in H to 1025-1100°, for 1 hr. Hydrogenated metals in which metal + H amounts to 90%, are obtained under the most favorable conditions. The amt. of H combined with Ti reaches about 4% (TiH and TiH_2). H combined with V in amts. of about 1.2-2%, with Cb 1-1.4% and with Ta 0.5-1.2%. The products of reduction are obtained in the form of homogeneous fine crystalline powders (the major portion has a grain size of up to 0.001 mm.) which can easily be freed of CaO by treatment with dil. HCl. A. A. Boehtlingk.

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CA

9

Hard alloys. G. A. Meerson. Russ 58,[illegible], Jan [illegible] 1911. A fine grain Ti carbide contg. up to 17% C, [illegible] made by heating TiO_2 to incandescence with an excess of C [illegible] black, adding W or Mo, and heating to 1400-1800°.

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PROCESSES AND PROPERTIES INDEX

8

Study of Conditions of Carburization of Titanium. G A. Meerson and Ya. M. Lipkes. Henry Brutcher (Altadena, Calif.), Translation No. 2099, 1948, 22 pages From *Zhurnal Prikladnoi Khimii* (Journal of Applied Chemistry), v. 14, no. 3, 1941, p. 291-301.

Describes investigation on maximum saturation of titanium carbide with carbon, as attainable in the heating of a mixture of titanium dioxide and carbon black at atmospheric pressure in a H_2 or a CO atmosphere, respectively. Discusses reasons for nonuniformity and poor quality of industrial titanium carbide and ways of improving the present production process.

METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDER

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CA

9

The formation of solid solutions in the system titanium-oxygen-carbon and conditions for obtaining titanium carbide for the production of hard alloys G. A. Meerson, *Ann. sect. anal. phys.-chim., Inst. chim. gén.* (U.S.S.R.) 16, No. 1, 197-219(1943). When TiO_2 is heated with C it tends to give homogeneous solid solns. composed of TiO and TiC when the content of bound C rises above 10%. No Ti is liberated in the reaction, which goes through 3 steps, forming successively Ti_2O_3, TiO, and TiC, with liberation of CO at each step. When a mixt. of TiO_2 + 3C is heated in a H atm. from 1100° to 1900° in 20 min., almost pure TiC is formed. If heating is continued longer, TiC begins to decomp. and an impure product is obtained. In a H atm. some C_2H_2 is formed and helps the reaction. If any N is present, TiN will form and give an impure product. If TiO_2 and C are heated to 1650° at a pressure of 1 mm. in the absence of N, pure TiC is formed, but if any N is present and the vacuum is not good, an excess of 2-3% C must be used to give a pure product.

H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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MEERSON, G. A.

Y

Hard alloys. G. A. Meerson. U.S.S.R. 65,067, Aug. 31, 1945. To an initial batch contg. W and Ti to be formed into a complex carbide (WCTiC) is added the auxiliary cementing metal, Co or Ni, in a quantity less than half its content in the final alloy. This mix is heated in a C cartridge at 1700-2400°. The product is ground to a size not exceeding 5μ. To this powder are added the remaining W and auxiliary metal and the mix is processed in the usual way for hard alloys. M. Hosch

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1ST AND 2ND ORDERS

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CA

Conditions of carbonization of titanium. III. G. A. Meerson and Ya. M. Lipkes. *J. Applied Chem.* (U.S.S.R.) 18, 24-34(1945).—The reaction of TiO_2 with C was studied as the means of production of TiC. The processes proceed in H_2 or CO atms. in the same manner as they do in analogous circumstances in the production furnaces (*C.A.* 36, 2343[9]), although under production conditions the atm. contg. N causes a more deep-seated decarbonization. G. M. Kosolapoff

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CA

18

Conditions for carbonization of titanium. IV. G. A. Meerson and Ya. M. Lipkes. *J. Applied Chem.* (U.S.S.R.) 18, 251-8(1945)(English summary); cf. *C.A.* 39, 5418[6]. Carbonization of Ti was studied at 1900° by heating TiO_2-C mixt. in a CO-H atm. Max. satn. of the carbide by C (at 19.5% C) occurs in the very beginning of the process; this value of bound C gradually drops to about 17%. Decarbonization by H treatment showed that products are formed which have "empty" places in the TiC lattice. Decarbonization in CO causes partial replacement of the displaced C atoms by O. Treatment under factory conditions, where N access is possible, leads also to formation of quantities of TiN as a result of C displacement by N; this may lead to a drop of C content to 14-15%. At 2000° TiC is not stable at atm. pressure and for prepn. of pure TiC vacuum carbonization is necessary.
O. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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MEYERSON, G. A.

USSR/Metals Jul 48

Metal Powders
Pressing Machinery

"M. Yu. Bal'shin's Book 'Powdered Metal Studies,'"
G. A. Meyerson, Dr Tech Sci, 4 pp

"Stal'" No 7

Book discusses theory of two important processes in powder metallurgy--pressing and sintering. Despite defects mentioned, book is superior to US and German works in same field. Published by Metallurgizdat, Moscow, 1948, 332 pp.

6/49185

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, G. A.

USSR/Chemistry - Analysis Dec 50

"Determination of Free Carbon in Boron Carbide," G. A. Meyerson, G. V. Samsonov, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin

"Zavod Lab" No 12, pp 1423-1428

Studied oxidation rate of differently granulated boron carbide with oxygen and chromium anhydride. Established that rate is const at given temp. Method was developed for volumetric and gravimetric detn of free carbon in boron carbide, using differences in rate and character of oxidation processes for boron and graphite.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

CA

Determination of free carbon in boron carbide. V. A. Meerson and G. V. Samsonov (M. I. Kalinin Inst. Non Ferrous Metals and Gold, Moscow). *Zavodskaya Lab.* 16, 1423-8(1950).—The rate of oxidation of B carbide is const at const. temp. independently of the grain size, when O or chromate soln. were used. The rate is less than that of graphite oxidation. A soln. of CrO_3 in H_2O is added at 100° to the sample, followed by H_2SO_4, and the resulting gases are swept by a current of dried air through the CuO absorber, followed by the drying train of P_2O_5, followed by NaOH absorbers, $CaCl_2$ tube, and a safety vessel. The absorbers are periodically weighed. The results are plotted and the value of free C is detd. as the difference between the total C oxidized up to the given instant and the product of the time (min.) and the rate of oxidation of C (per min.). Oxidation can be done with O at 900-1000° provided that the sample is well powd. (325 mesh or better). Accuracy of 0.5% is claimed. G. M. Kosolapoff

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

G.A. MEYERSON, G.B. SAMSONOV Jul 52

USSR/Chemistry - Zirconium

"Obtaining Zirconium Carbide in a Vacuum," Moscow Inst. of Nonferrous Metals and Gold im M. I. Kalinin

Zhur Prik Khim, Vol 25, No. 7, pp 744-748

By observing the rate of increase of CO given off in calcining of a mixture of ZrO_2 and carbon black, it was found that the reaction $ZrO_2 + 3C = ZrC + 2CO$ is additive and is composed of successive reactions in which ZR_2O_3 and ZrO are formed. The practical temp. range in which the reaction with formation of ZrC will proceed in a vacuum was established and the intermediate reactions were discovered. It is possible to obtain ZrC by the vacuum process ZrC which contains no N or O admixtures. A fundamental error was found in the work of Prescott and Hincke (Chem. Soc., vol 46) who suggest equil coexistence of ZrO_2 and ZrC in the same reaction

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MEYERSON, G.A

FILYAND, M.A.; SEMENOVA, Ye.I.; POGODIN, S.A., zasluzhennyy deyatel' nauki i tekhniki, professor, doktor, retsenzent; MEYERSON, G.A., professor, doktor, laureat Stalinskoy premii; SAMSONOV, G.V., redaktor; KAMAYEVA, O.M., redaktor; MIKHAYLOVA, V.V., tekhnicheskiy redaktor.

[Properties of rare elements; handbook] Svoistva redkikh elementov; spravochnik. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 414 p. (MLRA 7:11)
(Chemical elements)

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[illegible], G. A.

[illegible]

Izv. [illegible]

p[illegible]-1 3

[illegible]

[illegible]

[illegible]

SO: [illegible] (W-[illegible])

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

RSON, G. A.

Distr: 4E2c/4F1

Hardness of refractory carbides. G. A. Meerson and Ya. S. Umanskii. M. I. Kalinin Inst. Non-Ferrous Metals and Gold, Moscow. [illegible] Review. The crystal structures, lattice parameters, and m. ps. are tabulated of Ti, Zr, Hf, V, Nb, T, Mo, W, [illegible] ZrC, HfC, VC, NbC, TaC, Mo_2C, W_2C, and WC. Values of microhardness for TiC, ZrC, VC, NbC, TaC, Mo_2C, and WC are 2850 ± 40, 2838 ± [illegible] [illegible] WC, and W_2C are −56.511, −41.720, −27.524, −38.101, −38.000, +2.800, +14.500, and +2.974 kcal./mole, resp. The structure of these carbides is such that the interat. bonds retain their metallic character, while plastic deformation is prevented by the blocking effect of the C atoms. A 2nd factor contributing to their hardness is their chem. stability. The 1st and 2nd factors are most prominent in WC and TiC, resp. J. W. Loweberg, Jr.

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MEYERSON, G.A.; KISLYAKOV, I.P.

Investigation of the mechanical wear of powdered-metal hard alloys subjected to friction. Tren. i isn.mash. no.9:59-71 '54.(MLRA 7:9)
(Powder metallurgy) (Steel alloys) (Mechanical wear)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, S.A.

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

(2) Chem

Mechanism of the formation of titanium carbide in vacuo. G. A. Meerson and O. E. Krein. J. Appl. Chem. U.S.S.R. 25, 143-56(1952)(Engl. translation).—See C.A. 47, 4705e. H. L. H.

Zhur. Prik. Khim.

9-2-54

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MEYERSON, G.A.

7

Properties of the system of borides of titanium and zirconium. G. A. Meerson, G. V. Samsonov, and R. B. Kotel'nikov (M. I. Kalinin Inst. Non-Ferrous Metals and Gold, Moscow). *Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 25, 89-93(1954).—The relation of corrosion, microhardness, and elec. resistance to compn. of the system of borides of Ti and Zr shows that this system is a continuous series of solid solns. Microstructure and x-ray data also show this. R. Mayeric

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MEYERSON, G.A.

Chem
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USSR

Vacuum-Thermal Production of Borides of Refractory Metals. G. A. Meerson and G. V. Samsonov (*Zhur. Prikład. Khim.*, 1954, 27, (10), 1115–1120).—(In Russian). The borides of Ti, Zr, V, Nb, and Ta were prepared by vacuum reduction of the corresponding oxides with B_4C (78·2% B) + soot (99·9% C) in a graphite resistor furnace. The oxides had the following compn. (in %): (1) TiO_2 98·25, Fe_2O_3 0·75, CaO trace; (2) ZrO_2 97·9, CaO 0·43, TiO_2 0·35, Fe_2O_3 0·14, SiO_2 trace; (3) V_2O_5 99·15, Fe_2O_3 0·25, TiO_2 0·03, CaO trace; (4) Nb_2O_5 98·90, Ta_2O_5 0·65, TiO_2 0·27, Fe_2O_3 0·10; (5) Ta_2O_5 97·35, Nb_2O_5 2·23, SnO_2 0·91, SiO_2 0·73, TiO_2 0·68, Fe_2O_3 0·10. The course of the reaction was followed by measuring the pressure of the CO produced; results are given for TiB_2. At 1400° C. and above, 1 hr. heating was sufficient for the formation of TiB_2, the product contg. 30·5–31·5% B, ~0·02% C. Similar results were obtained for ZrB_2. X-ray analysis gave the following values for the lattice const. (hexagonal structure): TiB_2 $a = 3·020$, $c = 3·217$ kX, $c/a = 1·065$; ZrB_2 $a = 3·172$, $c = 3·538$ kX, $c/a = 1·115$. The mean particle size was 2·2–2·3 μ, with 70–80% between 1·5 and 3 μ; $d = 4·44$ and 6·24 for TiB_2 and ZrB_2, resp. The data obtained for the VB_2, NbB_2, and TaB_2 produced were, resp., as follows: B contents, 22·83, 18·95, 10·51%; C contents, 0·09, 0·17, 0·16%; $a = 3·000$, 3·080, 3·082 kX; $c = 3·050$, 3·304, 2·239 kX; $c/a = 1·027$, 1·073, 1·075; mean particle size 1·86, 1·90, 2·41; $d = 4·56$, 6·80, 11·85. Because of the high volatility of WO_3, it was first reduced to WO_2; the boride obtained had a compn. near to W_2B_5, mean particle size 2·4, $d = 11·96$, and lattice const. $a = 3·00$, $c = 13·60$ kX.—G. V. E. T.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, G.H.

USSR/ Chemistry Solubility

Card : 1/1

Authors : Zhdanov, G. S., Meerson, G. A., Zhuravlev, N. N., and Samsonov, G. V.

Title : Solubility of boron and carbon in boron carbide $B_{12}C_3$ (B_4C)

Periodical : Zhur. fiz. khim. 28, Ed. 6, 1076 - 1082, June 1954

Abstract : X-ray investigations were conducted to determine the possibility and solubility limits for B and C in B_4C and to explain the mechanism of the latter with respect to the solubility of components in a covalent chemical compound. The fact that the solution takes place by displacement of C-atoms in 1b positions by B-atoms and consequent formation of B_4C of the $B_{13}C_2$ composition, was established on the basis of roentgenograms. More detailed results are given in graphs. Eleven references: 7 USSR, 2 USA and 2 German. Table, drawing, illustrations.

Institution : The M. I. Kalinin Institute of Non-Ferrous Metals and Gold and the Mechanical Institute, Moscow

Submitted : September 19, 1953

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, G.A.

USSR/Engineering – Machining material

Card 1/1 : Pub. 86 – 5/40

Authors : Meerson, G. A., Prof.

Title : Hard alloys

Periodical : Priroda 43/4, 45-51, Apr 1954

Abstract : A solution is offered for the prevention of the softening of the edges of high-speed steel tools through the use of carbides of metals with a high-melting point (2,600 – 3,800° C). An account is given of the making and testing of carbides of Co, Cr, W alloys and many others. The microstructure of these materials is analyzed. The articles are enumerated that are made from these materials. Six USSR references (1827-1953). Graph; drawing; illustrations.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, G.A., professor, doktor nauk.

[Technology of making items of pure beryllium and beryllium oxide for use in nuclear reactors; reports of Soviet delegates to the International Conference on the Peaceful Uses of Atomic Energy] Tekhnologiia polucheniia izdelii iz chistykh berillia i okisi berilliia dlia ikh primeneniia v iadernykh reaktorakh; doklady predstavelnnye SSSR na Mezhdunarodniu konferentsiiu po mirnomu ispol'zovaniiu atomnoi energii. Moskva, 1955. 8 p. [Microfilm] (MLRA 10:5)

1. Interantional Conference on the Peaceful Uses of Atomic Energy, Geneva, 1955.

(Berryllium)

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MEYERSON, G.A.

[Metalloceramics of thorium] Metallokeramika toriia; doklady, predstavlennye SSSR na Mezhdunarodnuiu konferentsiiu po mirnomu ispol'zovaniiu atomnoi energii. Moskva, 1955. 13 p. [Microfilm]

(Thorium--Metallurgy) (MLRA 9:3)

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PHASE I BOOK EXPLOITATION 820

Meyerson, Grigoriy Abramovich, and Zelikman, Abram Naumovich

Metallurgiya redkikh metallov (Metallurgy of Rare Metals) Moscow, Metallurgizdat, 1955. 608 p. 5,500 copies printed.

Reviewers: Bol'shakov, K. A., Doctor, Professor, Abrikosov, N. Kh., Doctor of Chemical Sciences, Maslyanitskiy, I. N., Doctor, Professor, Greyver, N. S., Doctor, Professor; Ed.: Vysotskaya, V. N.; Ed. of Publishing House: Kamayeva, O. M.; Tech. Ed.: Attopovich, M. K.

PURPOSE: This book is recommended as a textbook for students at metallurgical institutes and may also be useful to engineers and technicians.

COVERAGE: The book deals with the industrial production of refractory metals (tungsten, molybdenum, tantalum, niobium, vanadium, titanium, and zirconium) and the trace-associate metals (gallium, indium, thallium, germanium, selenium, tellurium, and rhenium). Physical and chemical properties are given, and fields of application are specified. The authors explain the theoretical and practical aspects of the production of pure metals and their more important alloys and chemical compounds. Chapters IV, VII, XIII-XVI, and Section 60

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were written by G.A. Meyerson,; Chapters I-III, V, VI, VIII-XII, XVII-XXII, by A.N. Zelikman. The authors express their thanks for suggestions received from the reviewers and from scientific workers in the Department of Metallurgy of Light Metals of the Moskovskiy institut tsvetnykh metallov i zolota (Moscow Institute of Nonferrous Metals and Gold), at the Gosudarstvennyy nauchno-issledovatel'skiy institut po redkim metallam (State Scientific Research Institute for Rare Metals), and at the Vsesoyuznyy nauchno-issledovatel'skiy institut po tverdym splavam (All-Union Scientific Research Institute for Hard Alloys). There are 375 references, of which 205 are Soviet, 126 English, 40 German, 3 French, and 1 Italian.

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MEYERSON, G A.

The powder metallurgy of [illegible]

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MEYERSON, G. A.

Manufacturing articles of pure beryllium and beryllium oxide for use in nuclear reactors. G. A. Meerson, G. E. Kaplan, G. F. Silina, and D. D. Sokolov. Tsvetnaya Metal. Obiazti Geol. Khim. i Met. [illegible] S S [illegible]

[illegible] described. Articles are made from BeO by (1) forming in graphite molds, and firing at 1800°, (2) pressing BeO in graphite molds at 1800° and under pressure of 18–20 kg/sq. cm., (3) pressing under 10⁻⁴ mm. Hg at 1850–1900° under 15–20 kg/sq. cm. Pure Be was obtained by electrolysis of molten chlorides. Articles for the nuclear [illegible] to be used at high [illegible] in graphite-lined [illegible] by induction to 1100°. The residual thermal stresses are eliminated by vacuum annealing at 1100° and slow cooling. Articles for use at lower temp are made by hot-pressing in open app. at 600° under 5 tons/sq. cm. Rods and pipes are extruded in the hot state from the billets obtained by metalloceramic methods.

Alexis N. Pestoff

Rmk MT

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MEYERSON, G. A. and SMIRNOV, M. P.

"An investigation of the mechanism of the electrolytic preparation of borides of the high melting metals", Khimiya Redkikh Elementov, No. 2, p 130, 1955.

The above mechanism was studied on an example of preparation of titanium bordes by the electrolysis of a molten mixture $2B_2O_3 + CaO + CaF_2 + TiO_2$. On the basis of the results obtained, the mechanism of the formation of bodies during electrolysis was elucidated.

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MEYERSON, G.A.

USSR

2337. A method of producing boron nitride. G. A. MEYERSON, G. V. SAMSONOV, and N. YA. TRETINA (*Ogneupory*, 20, 72, 1955). Methods of producing BN are summarized; the best method is considered to be treatment of a batch of B_2O_3+CaO+NH_4Cl with NH_3 at 1,100°-1,200° C. The batch is made by sintering together B_2O_3 and CaO obtained by heating H_3BO_3 with chalk, the decomposition of the hydrate and the carbonate resulting in a fine distribution of B_2O_3 between the CaO particles and partial formation of Ca borate. It is claimed that this method results in a 92-93% yield of BN. It is stated that BN cannot be sintered into dense specimens by hot-pressing under normal conditions, since at high temperatures BN dissociates and takes up carbon. (2 figs., 7 tables.)

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MEYERSON, G. A. and KOLCHIN, O. P.

"ON the Physicochemical Principles of the Process of Reducing Chemically Stable Oxides with Calcium Hydride," Sbornik Nauchnykh Trudov, Moskovskiy Institut Tsvetnykh Metallov i Zolota imeni M. I. Kalinin, No. 25, 1955

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MEYERSON, G. A.

27 15

Vacuum-thermal production of borides of refractory metals, and investigation of several boride systems. G. A. Meerson, G. V. Samsonov, R. B. Kotel'nikov, and N. Ya. Tselina. *Sbornik Nauch. Trudov Moskov. Unip. Tsvetnykh Metal. i Zolota* 1955, No. 25, 200-25; *Referat. Zhur., Met.* 1956, Abstr. No. 9158.—The conditions of production of borides of Ti, Zr, V, Nb, Ta, and W, and the binary systems of certain borides were studied. Briquets of metal oxide, B_4C, and C black were charged into a vacuum elec.-resisting furnace. The optimal conditions of boride production were found from tensiometric data. X-ray analysis of the powders of borides Ti, Zr, V, Nb, and Ta showed lattice consts. agreeing with those in the literature. The ds. of the borides detd. by micropycnometer agreed with the calcd. ds. W boride, on account of volatility of W oxides, was obtained at much lower temp. with the excess of WO_3: it has the approx. compn. W_2B_5 with the lattice consts. a = 3.00 A. and c = 13.80 A. and d. 12.06. Alloys of systems TiB_2-ZrB_2, TaB_2-ZrB_2, and TiB_2-NbB_2 were prepd. by hot-pressing with subsequent annealing; all were monophasic, and their lattice consts. were linearly proportional to their compns. The alloys were comparatively corrosion-resistant, this resistance changing gradually with the compn. The microhardness graph of the system changes continuously. The diagram of compn. vs. elec. cond. is a continuous curve, with convex upward. This indicates that the borides form a continuous series of solid solns. A. N. Pestoff

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PAZUKHIN, Vasiliy Aleksandrovich; FISHER, Aleksandr Yakovlevich; KRESTOVNIKOV, A.N., professor, doktor, retsenzent; MEYERSON, G.A., professor, doktor, retsenzent; ZHUKOVSKIY, Ye.I., professor, doktor, retsenzent; MEN'SHIKOV, M.I., kandidat tekhnicheskikh nauk, retsenzent; SAMSONOV, G.V., kandidat tekhnicheskikh nauk, retsenzent; MESHCHERYAKOV, S.I., kandidat tekhnicheskikh nauk, retsenzent; SAMSONOV, G.V., redaktor; ARKHANGEL'SKAYA, M.S., redaktor izdatel'stva; ERLOV, A.P., tekhnicheskiy redaktor

[Vacuum in metallurgy] Vakuum v metallurgii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 520 p.
(Vacuum) (Metallurgy)
(MLRA 9:12)

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AL'TGAUZEN, O.N.---- (continued) Card 2.
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[Physical metallurgy and the heat treatment of steel and iron; a reference book] Metallovedenie i termicheskaia obrabotka stali i chuguna; spravochnik. Pod red. N.T.Dudtsova, M.L.Bernshteina, A.G. Rakhshtadta. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 1204 p. (MLRA 9:9)

1. Chlen -korrespondent Akademii nauk USSR (for Bunin)
(Steel--Heat treatment) (Iron--Heat treatment)
(Physical metallurgy)

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MEYERSON, G. A.

Category : USSR/Solid State Physics - Diffusion. Sintering E-6

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6690

Author : Meyerson, G.A.

Title : On Certain Problems in the Theory of Sintering.

Orig Pub : Poroshkovaya metallurgiya, Yaroslavl', 1956, 11-30

Abstract : Survey, devoted to a discussion of the fundamental outlines of the mechanism of the sintering process. Bibliography, 29 titles.

Card : 1/1

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MEYERSON, G.A.

MEYERSON, G.A.

Rare elements in modern technology. N. P. Sazhin and [illegible] 2

[illegible]

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MEYERSON, G. A. Prof.

"Ways for the Development of Titanium Production," by Prof G. A. Meyerson, Khimicheskaya Nauka i Promyshlennost', Vol 1, No 5, Sep/Oct 56, pp 496-504

After reviewing briefly the uses of titanium and pointing out its corrosion resistance, the heat resistance of titanium carbide and its use as a material for the construction of gas turbines, the advantages of titanium as a construction material, and the advantageous properties of titanium alloys as far as mechanical strength is concerned, the author discusses in some detail the technology of titanium production, mainly on the basis of non-USSR publications. Starting with a review of procedures for the production of titanium from rutile and ilmenite, he subjects to consideration methods for the production of ductile titanium, the metal-ceramic (metal powder) method for the production of ductile titanium, reduction of titanium tetrachloride with sodium in the gas phase or on the surface of sodium chloride forming a fluidized solid bed in the reduction furnace, the electrolytic separation of titanium, and the thermal decomposition of titanium halides (particularly TiI_4).

[Comment: The technology of titanium production is of importance by reason of the potential application of high-melting titanium derivatives, alloys, and cermets at nuclear energy power plants and nuclear energy installations in general. For instance, titanium carbide may be used in gas turbines operated by nuclear power.]

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MEYERSON, G.A.

5
1-4E2c

Powder-Metallurgical Hard Metals with a Non-Uniform Distribution of the Carbide Phase for the Manufacture of Abrasive Materials. G. A. Meerson and G. V. Samsonov. *Izvest. Akad. Nauk S.S.S.R.* 1956, [Tekhn.] (4), 121-125.—[In Russian]. The conditions of prepn. of these materials were studied. In grinding the abrasive material, projections with higher wear resistance are formed on the surface of the hard metal, holding back in the matrix the less wear resistant but less brittle [illegible] This type of structure [illegible] resistance than homogenous [illegible]

PM RG
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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720016-8

MEYERSON, G.A

AUTHOR: MEYERSON, G.A., KOLCHIN, O.P. PA - 2307

TITLE: On the Mechanism of the Reduction of the Oxides of Zirconium and Titanium by Calcium-hydride. (O mekhanizme vostanovleniya okislov tsirkoniya i titana gidridom kal'tsiya, Russian).

PERIODICAL: Atomnaia Energiia, 1957, Vol 2, Nr 3, pp 253 - 259 (U.S.S.R.)
Received: 4 / 1957 Reviewed: 5 / 1957

ABSTRACT: On the basis of the example of these reduction processes the theoretical basis of the reduction of the chemically stable metal oxides by calcium-hydride is investigated. The present paper studies the physical-chemical conditions for the use of calcium-hydride as reduction means of zirconium- and titanium oxides. The question as to whether calcium hydride (as a means of reduction of higher energy) is more advantageous than calcium, mainely in connection with the separation of atomic hydrogen during the decomposition of calcium-hydride, is above all investigated. The thermo-dynamics of the reduction processes mentioned in the title and the experiments carried out when investigating the mechanism of the reactions are discussed. The following results are obtained from these investigations:
1) By means of the thermodynamic computation of these reduction processes and by means of special experiments the reducing activity of the calcium-hydride and of the calcium liberated during its thermal dissociation and of the atomic hydrogen was determined. The decrease of the free energy during the interaction of atomic

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Meyerson, G. A.

Distr: 4E2c

Study of heterogeneous reactions, with application of grinding and mixing (acid decomposition of scheelite). G. A. Meyerson and P. A. Pavlyuk. Zhur. Neorg. Khim. 2, 1371-8(1957).—Equil. conditions in the reaction $CaWO_4 + HCl \rightleftharpoons H_2WO_4 + CaCl_2$ are studied. This reaction is used in scheelite decompn. in heated ball mills. It is found that scheelite decompn. does not require high HCl concns. as previously used. A. Volborth

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MEYERSON, G. A

136-3-8/25

AUTHORS: Meyerson, G. A. and Khavskiy, N. N.

TITLE: Study of Ways of Improving the Acid Method of Treating Scheelite. (Izucheniye putey usovershenstvovaniya kislotnogo metoda pererabotki sheelita).

PERIODICAL: Tsvetnyye Metally, 1957, No.3, pp.41 47 (USSR)

ABSTRACT: The decomposition of scheelite concentrates with acids is not applied industrially. The authors consider that one of the causes hindering such processes is the action of H_2WO_4 films formed on scheelite grains. Preliminary experiments showed that decomposition with hot hydrochloric acid in bath mills avoided this effect and this method was adopted in the investigation described. 650-ml capacity porcelain ball mills were used, the materials treated being concentrates from the Chelyabinsk and Chorukh-Dayron beneficiation works, with 47.1 and 42.32% WO_3, respectively. The results obtained are represented by plots against time of: degree of decomposition at various temperatures; final hydrochloric acid concentration for 20 and 10% excesses of acid; degrees of decomposition of roasted and unroasted concentrates and for treatment with and without balls in the mill. Tabulations of results are also given. A two-stage treatment was also studied and results for each stage are tabulated.

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Study of Ways of Improving the Acid Method of Treating Scheelite. 136-3-8/25

The work showed the possibility of a single stage decomposition of scheelite at 100 C and with a quantity of hydrochloric acid 120% of theoretical, 99-100% of the WO_3 being extracted into the ammoniacal solution under laboratory conditions. 1 to 2% final acid concentration gave practically complete decomposition. With the conditions selected for the two-stage decomposition similar results were obtained. This technique is recommended for use when the plant is being worked very intensively, since it enables rapid final extraction with high acid concentrations and excesses to be achieved in the second stage. It is suggested that ball-mills can be operated at atmospheric pressure under reflux condensers and that with acid leaching ammonia and not soda should be used for neutralization; hydrochloric acid could be regenerated by treating the waste liquid ($CaCl_2$ + HCl) with sulphur acid. Because of the advantages of the acid leaching technique its full scale testing is recommended.

2/2 There are 5 figures, 8 tables and 8 references, 5 of which are Slavic.

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MEYERSON (G.A.)

AUTHOR MEYERSON, G.A., KAPLAN, G.Ye., USPENSKAYA, T.A. 69-9-15/32

TITLE Improvement of the Alkali Decomposition Process of Monazite.
(Usovershenstvovanie protsessa shchelochnogo razlozheniya monatsita)

PERIODICAL Atomnaya Energiya, 1957, Vol 3, Nr 9, pp 259-260 (USSR)

ABSTRACT The initial material, a monazite concentration, had a granulation of 1-5 mm. As a decomposing medium NaUH (50 g/1) was used at a temperature of 130°C. First, the concentration was treated in a heatable ball mill (1,5 l cubic capacity, diameter 0,8 cm, weight 1,5 kg), which was mounted in a lift thermostat. Experimentally 4 hours duration was found to be the optimum. It was further proved by experiment that the decomposition of the concentrate (> 99,5 %) is best if the consumption of NaOH is 150 - 200 % of the weight of the initial concentrate. For a further reduction of the concumption of NaOH a further two-step treatment was used. During the first step 75 % of the weight of the initial material was used as NaOG weight. The not soluble remains of this step were collected (from 10 fillings) and were

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