KUSHAKEVICH, Yu. P.

21(8)
AUTHORS: Selinov, I. P., Grits, Yu. A., Khalelidze, D. Ye., Bareni, Ye. Ye., Dlidze, Yu. A., Denisova, A. G., Kushakevich, Yu. P. SOV/89-5-6-17/25

TITLE: New Isotopes of Antimony (Novyye izotopy sur'my)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 660 - 660 (USSR)

ABSTRACT: An enriched tin preparation [Sn^{112} (52,3 %), Sn^{114} (57,2 %)] was bombarded with 10 MeV deuterons. Two hitherto unknown activities with 7,0 ± 0,5 min and 31 ± 1 min half life were measured. In both cases the β^+-limiting energy (measured by the absorption method) amounted to 2 MeV. Chemical separation of both activities showed that antimony isotopes were concerned. The probable reactions are $Sn^{112}(d,n)Sb^{113}$ and $Sn^{114}(d,n)Sb^{115}$. The decay scheme is at present being further investigated.

SUBMITTED: September 6, 1958

DEMIN, A.G.; KUSHAKEVICH, Yu.P.; MAKOVEYEV, Ye.A.; ROZMAN, I.M.; CHACHAKOV, A.F.

Millisecond thallium isomers. Zhur. eksp. i teor. fiz. 45 no.5:1344-1351 N '63. (MIRA 17:1)

L 45195-65 EWT(m)/EWP(t)/EWP(b) Pab DIAAP/IJP(c) JD JG

ACCESSION NR: AP5009824 UR/0367/65/001/002/0198/0200

25
24
B

AUTHORS: Demin, A. G.; Kushakevich, Yu. P.

TITLE: New isomers of Sc-43, In-109, and Xe-125

SOURCE: Yadernaya fizika, v. 1, no. 2, 1965, 198-200

TOPIC TAGS: scandium, indium, xenon, short lived isomer, gamma transition, isomer spin, isomer energy

ABSTRACT: Searches for new short-life isomers (10^{-4} - 10 sec) were made by pulsed bombardment of targets with 220 MeV alpha particles and 11-MeV deuterons from an extracted cyclotron beam. The experimental procedure was described in detail earlier (ZhETF v. 45, 1344, 1963). The isomers were identified with crossing reactions by irradiating enriched Ag and Te isotopes and by comparison with the reaction yields and their variations with alpha-particle energy. The half-lifes, energies, and the relative intensities of the gamma

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L 45196-65

ACCESSION NR: AP5009824

transitions were measured. The results are listed in Table 1 of the Enclosure. The presence of a low-lying $3/2^+$ level in Sc^{43} agrees with cluster-model deductions. The results point to rather large spins and energies of the new isomer states in In^{109} and Xe^{125} (spins at least 21/2 and 25/2, energies approximately 2.73 and 3.05 MeV, respectively). "The authors are grateful to leader A. F. Chachakov of the cyclotron crew." Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 04Sep64 ENCL: 01 SUB CODE: NP

NR REF SOV: 002 OTHER: 004

Card 2/3

KHUBELIDZE, D.Ye.; CHIKHLADZE, V.L.; CHUFRIYEV, V.G.; KUSHAKEVICH, Yu.P.; DYATLOV, V.K.

Isomeric transitions in In^{114m} and Te^{115m}. The β^+-spectrum of Te^{115}. Izv. AN SSSR.Ser.fiz.29 no.5:734-738 My '65. (MIRA 18:5)

1. Fiziko-tekhnicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

KUSHAKOV, S.V., inshener stroyuchastka.

Placing axis roadbed marks on the road shoulders in track laying. Put' i put.khoz. 4 no.9:18 S '60. (MIRA 13:9)
(Railroads--Track)

KUSHAKOV, V.I.

Content of total 17-hydroxycorticosteroids in the urine during the acute period of miocardial infarct. Trudy TSIU 77:40-43 '65.
(MIRA 18:9)

1. I kafedra terapii (zav.- prof. A.Z. Chernov) Tsentral'nogo instituta usovershenstvovaniya vrachey.

ANDREYEV, G.Ya., kand.tekhn.nauk; LEKTIONOV, N.M., inzh.; ARPENT'YEV, B.M., inzh.; KUSHAKOV, V.I., inzh.

Semiautomatic assembly of heated wheel pairs of railroad cars. Mashinostroenie no.6:15-17 N-D '65. (MIRA 18:12)

KUSHAKOVA, O.A.

Aneurysm of the aortic conus in subacute septic endocarditis. (MIRA 11:5)
Vrach.delo no.3:275-277 Mr'58

1. Kafedra gospital'noy terapii (zav. - prof. P.I. Shamarin) pediatricheskogo fakul'teta Saratovskogo meditsinskogo instituta.
(AORTIC ANEURYSMS)
(ENDOCARDITIS)

ACC NR: AT6036655 SOURCE CODE: UR/0000/66/000/000/0282/0283

AUTHOR: Mozzhukhin, A. S.; Kuznetsov, V. I.; Kushakovskaya, M. S.; Makhalova, O.K; Goryachev, I. A.; Solntsev, S. A.; Shostak, V. I.; Kudrin, I. D.

ORG: none

TITLE: Effect of radioprotective drugs on the functional condition of the human organism [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 282-283

TOPIC TAGS: radiation protection, space pharmacology, cosmic radiation biologic effect, human physiology, space medicine, motion sickness

ABSTRACT:
The effect of cystamine on the functional condition of the human organism was studied (on the the basis of the hypothesis of A. V. Lebedinskiy). Five hundred heathy volunteers were used. The maximum permissible dose of cystamine was established as a dose of 1.2 [units not given] per single application, or 0.8 units every 6 hr for 24 hr, or 0.6—0.8 units once a day for a month. Administration of cystamine in the doses indicated did not cause any significant changes in work capacity, hematopoiesis, or in cardiovascu-

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ACC NR: AT6036655

lar, respiratory, digestive, excretory, or nervous system function. However, administration of cystamine did lead to complaints of lethargy and brief unpleasant sensations in the epigastrium in 10% of the cases. After administration of the drug some increase in sensitivity to motion sickness and to the effect of high temperatures was noted among subjects.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

KUSHAKOVSKIY, L.N.; STEFANOVSKAYA, Z.F.

Sanitation value of a sedimentation pond for the purification of industrial waste water from a metallurgical plant. Gig.i san. no.1:51-52 Ja '54. (MLRA 6:12)

1. Iz kafedry kommunal'noy gigiyeny Dnepropetrovskogo meditsinskogo instituta.

(Factory and trade waste) (Water--Purification)

Kushakovskiy, L.N.

AID P - 2170

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 12/22

Authors : Kushakovskiy, L. N., Prof., and Pozdnyakova, T. D.

Title : Photocolorimetric determination of the arsenic and phosphorus content in industrial waste water of metallurgical plants

Periodical : Gig. i san., 4, 46-48, Ap 1955

Abstract : A method is presented for a quantitative determination of arsenic and phosphorus in waste water. The reaction producing molybdene heteropoly acids in blue colored complexes is used. According to the authors, their method is simple, quick and precise. Tables, 5 Russian references (1939-1950).

Institution : Chair of Hygiene, Dnepropetrovsk Pharmaceutical Institute

Submitted : Jl 19, 1954

KUSHAKOVSKIY, L.N.

Some data for the determination of areas requiring sanitation at the therapeutic mud resort of Solenyy Liman. Gig. i san. no.10:43-44 O '55. (MLRA 9:1)
(SOLENYY LIMAN--EARTHS, MEDICAL AND SURGICAL USES OF)

KUSHAKOVSKIY, L.N., prof.

Methods for purifying phenol waste waters. Gig. i san. 22 no.2:78-79 F '57 (MLRA 10:4)

1. Iz Dnepropetrovskogo meditsinskogo instituta.
(SEWAGE
purification of phenol waste waters, methods)
(PHENOLS
same)

KUSHAKOVS'KIY, Lev Naumovich; DEMERDZHI, D., redaktor; KOLOMOYTSEVA, V., tekhnicheskiy redaktor

[Solenyy Liman Health Resort in Dnepropetrovsk Province] Likuval'na mistsevist' Solonyi lyman na Dnipropetrovshchyni. [Dnipropetrovs'k] Dnipropetrovs'ke obl.vyd-vo, 1957. 47 p. (MLRA 10:9)
(SOLENYY LIMAN)

KUSHAKOVSKIY, L. N.

KUSHAKOVSKIY, L.N., prof.

On Professor S.A.Giliarevskii's article "Significance of clinical teaching in the training of specialists in preventive medicine." (MIRA 11:2)
Gig. i san. 23 no.1:61-63 Ja '58.

1. Iz kafedry obshchey gigiyeny Stanislavskogo meditsinskogo instituta.
(MEDICINE, PREVENTIVE, educ.
clinical courses)

VOL'FSON, Z.G., prof.; KUSHAKOVSKIY, L.I., prof.; BARANNIK, P.I., prof.; MIKHALYUK, I.A., dotsent; SHNAL', D.D., dotsent

"Hygiene textbook" [1st and 2nd editions] by V.A.Pokrovskii. Reviewed by Z.G.Vol'fson and others. Gig. i san. 26 no.11: 102-106 N '61. (MIRA 14:11)
(HYGIENE) (POKROVSKII, V.A.)

KUSHAKOVSKIY, L.N., prof.; NEYMAN, M.I., red.; KOKIN, N.M., tekhn. red.

[Air has to be clean] Vozdukh dolzhen byt' chistym. Moskva, Medgiz, 1963. 53 p. (MIRA 16:4)
(AIR—POLLUTION) (AIR—PURIFICATION)

SOV/177-58-5-9/30

17(10)

AUTHORS: Kushakovskiy, M.S., Major of the Medical Corps, Baukin, V.N., Captain of the Medical Corps

TITLE: Affections of the Myocardium in Certain Virus Diseases (O porazheniyakh miokarda pri nekotorykh virusnykh zabolevaniyakh)

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 5, pp 44-48 (USSR)

ABSTRACT: The article deals with affections of the myocardium in certain virus diseases. According to Chepil and Kosman, virus myocarditis occurs more frequently than is diagnosed. The authors observed some cases of myocarditis developed on the background of virus hepatitis (Botkin's disease), influenza and influenzal pneumonia. Careful clinical examinations revealed symptoms of an affaction of the myocardium with the character of an inflammation process although the clinical appearances of acute myocarditis were very poor. Bengtsson and Birk recognized infectious

Card 1/2

Affections of the Myocardium in Certain Virus Diseases SOV/177-58-5-9/30

myocarditis in 15% of cases only by electrocardiogram, in 30% by systolic murmur and tachycardia, and in 30% of cases by high figures of the erythrocytes sedimentation reaction. In less pronounced forms of the disease, the entire symptom complex characteristic of myocarditis cannot be detected. Chepil and Kosman have proved that many forms of myocarditis take their course without increasing the number of leucocytos in the peripheric blood. The authors finish the article by stressing the importance of electrocardiographic examination, which makes it possible to distinguish secondary dystrophies from true inflammation processes in the myocardium. There are 2 sets of electrocardiograms.

Card 2/2

KUSHAKOVSKIY, M.S., kand.med.nauk

Characteristics of hemodynamics in the nephrogenic stage of hypertension. Report No.2: Oxygen supply of tissues. Terap.arkh. 30 no.1: 19-24 Ja '58 (MIRA 11:3)

1. Iz kliniki propedevtiki vnutrennikh bolezney (nach. - deystvitel'nyy chlen AMN SSSR prof. N.N.Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(HYPERTENSION, physiology,
renal, oxygen balance (Rus))
(RESPIRATION, in var. dis.
hypertension, renal, oxygen blance (Rus))

GISMATULLIN, R.I.; KUSHAKOVSKIY, M.S., kand. med. nauk

Minute volume of the heart as indicated by low-frequency indirect ballistocardiography, and by the acetylene and sphygmographic methods. Terap. arkh. 30 no.11:70-77 N '58. (MIRA 12:7)

1. Iz kafedry propedevtiki vnutrennikh bolezney (nach. - deystvit. chlen AMN SSSR prof. N.N. Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.
(BLOOD VOLUME) (BALLISTOCARDIOGRAPHY)
(SPHYGMOGRAPH) (ACETYLENE)

KUZNETSOV, V.I., dotsent; KUSHAKOVSKIY, M.S., kand.med.nauk; MIKHAYEV, M.I. (Leningrad)

Antihypertensive activity of cystamine. Klin.med. 39 no.1:71-76 Ja '61. (MIRA 14:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney (nach. - zasluzhennyy deyatel' nauki deystvitel'nyy chlen AMN SSSR prof. N.N. Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(BLOOD PRESSURE)
(THYLAMINE)

KUZNETSOV, V.I.; KUSHAKOVSKII, M.S. [Kushakovskiy, M.S.]

Haemodynamics and tissue oxygen supply in patients with chronic methaemoglobinaemia. Cor vasa 4 no.4:281-288 '62.

1. Department of Internal Medicine, Kirov Academy of Military Medicine, Leningrad, USSR.
(METHEMOGLOBINEMIA) (BLOOD CIRCULATION)
(BLOOD GAS ANALYSIS)

KUSHAKOVSKIY, M.S. (Leningrad)

Experimental therapy and prevention of methemoglobinemia with cystamine hydrochloride. Bul. fiziol. i eksp. terap. 5 no.4: 15-18 Jl-Ag '52. (MLRA 10:6)

1. Iz kafedry propedevtiki vnutrennikh bolezney (nachal'nik - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. N.N. Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

KUSHAKOVSKIY, M.S.

Prospects for using sulfhydryl compounds in the prevention and treatment of methemoglobinemia. Vest.AMN SSSR 17 no.7:47-54 '62. (MIRA 15:10)

1. Voyenno-meditsinskaya akademiya imeni S.M.Kirova.
(BLOOD—DISEASES) (MERCAPTO COMPOUNDS)

L 12585-63 EWT(m)/BDS RM

ACCESSION NR: AP3002632 S/0218/63/028/003/0451/0461

AUTHOR: Kushakovskiy, M. S.

TITLE: Cystamine mechanisms of methemoglobin reduction

SOURCE: Biokhimiya, v. 28, no. 3, 1963, 451-461

TOPIC TAGS: methemoglobin reduction, cystamine mechanism, TPN oxidation, betamercaptoethylamine, methylene blue

ABSTRACT: Biochemists have been trying to find physiological electron carriers which like methylene blue would activate TPN-H oxidation and speed methemoglobin (MetHb) reduction in human erythrocytes. Earlier investigations disclosed that aminodisulphide-cystamine and its derivatives sharply increase MetHb reduction. The author made this study to confirm that the effect of cystamine is related to the activation of TPN-H oxidation, that is, to the initial stages of the pentosephosphate cycle of glucose cleavage in erythrocytes. Cystamine hydrochloride, betamercaptoethylamine, glucose, methylene blue, and sodium oxide lactate were added to erythrocyte suspensions depending on the purpose of the experiment. Results show that cystamine hydrochloride has a marked capacity to reduce MetHb in

Card 1/2

L 12585-63
ACCESSION NR: AP3002632

erythrocytes, hemolysates, and crystalline hemoglobin solutions because the cystamine itself is first reduced to betamercaptoethylamine. This reaction is not related to oxidation of 3-phosphoglyceraldehyde and lactic acid (the activity of DNP dependent systems). The experiments (tables 1-8) confirm that cystamine speeds MetHb reduction in erythrocytes by the interaction of the hexosemonophosphate shunt enzyme system and actively stimulates TPN-H oxidation by its effect on reduced glutathione and TPN-H-MetHb reductase. Orig. art. has: 10 tables.

ASSOCIATION: Voyenno-meditsinskaya ordena Lenina akademiya im. S. M. Kirova, Leningrad (Military Medical Order of Lenin Academy)

SUBMITTED: 16Aug62 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: AM, CH NO REF SOV: 014 OTHER: 019

Card 2/2

L 9988-63 EPF(c)/EWT(l)/EPF(n)-2/EWT(m)/BDS/ES(b)--AFFTC/ASD/SSD--Pr-4/
Pu-4--RM/MAY/K
ACCESSION NR: AP3002858 S/0241/63/008/006/0027/0032

70
69

AUTHOR: Kuznetsov, V. I.; Kushakovskiy, M. S.

TITLE: Mechanism of the effect of antiradiation agents 19

SOURCE: Meditsinskaya radiologiya, v. 8, no. 6, 1963, 27-32

TOPIC TAGS: radioprotective agents, radioprotective mechanisms, cystamine, S,Beta-aminoethylisothiuronium, AET, oxygen balance, hypoxia, oxygen effect

ABSTRACT: Cystamine and AET (S,Beta-aminoethylisothiuronium), whose radioprotective mechanisms have been thought to be similar and based on hypoxia, were studied to determine their effect on the various steps in the supplying of oxygen to the tissues of the human body. An attempt was made to discover whether these preparations do, in fact, induce some form or other of hypoxia. Information was also sought on the significance of the "oxygen effect" and hypoxia in the radioprotective mechanisms of sulfhydryl compounds. Cystamine given per ora in 200, 400, and 600 mg doses caused an increase in basal metabolism, increased oxygen consumption in the lungs, and a drop in methemoglobin. Added to a suspension of erythrocytes, with glucose present, cystamine increased the absorption of oxygen and the elimination of CO sub 2 from five- to eighteenfold.

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L 9988-63
ACCESSION NR: AP3002858

Data obtained indicated that cystamine does not cause hypoxia of the hemic, anoxic, stagnation, or histotoxic types. Similar doses of AET, on the other hand, had an inhibitory effect on oxygen balance, producing a lowering of basal metabolism and a reduced coefficient of oxygen consumption in the lungs. Unlike cystamine, AET penetrates the erythrocyte membrane weakly. The possibility of AET-induced hypoxia was by no means ruled out. It is concluded that the radioprotective effect of cystamine in humans cannot be satisfactorily explained on the basis of the hypoxia theory, and that the radioprotective mechanisms of cystamine and S,Beta-aminoethylisothiuronium are not identical. Orig. art. has: 1 table.

ASSOCIATION: Voyenno-meditsinskaya Ordena Lenina akademiya imeni S. M. Kirova (Military Medical Academy)

SUBMITTED: 04Jun62 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 000 OTHER: 000

ja/cs
Card 2/2

ACCESSION NR: AP4027978 S/0205/64/004/002/0266/0269

AUTHOR: Rachinskiy, F. Yu.; Kushakovskiy, M. S.; Matveyev, B. V. (Deceased); Slavachevskaya, N. M.; Tank, L. I.

TITLE: Radioprotective action of thiazolidines

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 266-269

TOPIC TAGS: thiazolidine, thiazolidine hydrolysis, thiazole ring substitution, radioprotective action, X-irradiation, lethal dose, 2,2-dimethylthiazolidine, 2-phenylthiazolidine, 2-oxymethylthiazolidine, 2-n-nitrophenylthiazolidine, 2-n-dimethylaminophenylthiazolidine

ABSTRACT: Radioprotective action of 25 thiazolidines with substitutions in the second position of the thiazole ring was investigated in 2000 experimental mice. Most of the thiazolidine preparations were administered intramuscularly to groups of experimental animals in the form of neutral aqueous solutions 5-15 min before irradiation, and some of the preparations were administered intraperitoneally in the form of an oil solution 1 hr before irradiation. Control and

ACCESSION NR: AP4027978

experimental animal groups were X-irradiated with single 700-r doses (RUM-3, 180 kv, 15 ma, 34-36 r/min), and all control animals died shortly. Of the 25 preparations tested, ten increase survivability of irradiated animals. 2,2-dimethylthiazolidine and 2-phenylthiazolidine protected more than 50% of the animals from death in their respective groups. But these two preparations are radioprotective only with large doses approaching the toxic level. Other preparations displaying protective action are 2-oxymethylthiazolidine, which is not stable, and salts of 2-n-nitrophenylthiazolidine and of 2-n-dimethylaminophenylthiazolidine, which hydrolyze too fast. Hydrocarbon derivatives are also radioprotective. Preparations which hydrolyze slowly administered 1 hr before irradiation were not found to be more radioprotective than preparations which hydrolyze fast. This study has not determined the effect of second position substitutions in the thiazole ring on radioprotective activity, but the data suggest a possible relationship may be established for some thiazolidine preparations. Orig. art. has: 3 tables.

ASSOCIATION: Voenno-meditsinskaya ordena Lenina akademiya im. S. M. Kirova, Lenningrad (Military-Medical "Order of Lenin" Academy.

Card 2/2

L 41617-65 EWG(j)/EWT(m) GS
ACCESSION NR: AT5008048 S/0000/64/000/000/0233/0247 27
B11

AUTHOR: Rachinskiy, F. Yu.; Kushakovskiy, M. S.; Matveyev, B. V.; Potapenko, T. G.; Slavachevskaya, N. M.; Tank, L. I.; Titov, A. V.; Yampol'skaya, L. I.

TITLE: Comparative evaluation of certain models for the initial selection of radiation protection compounds 17

SOURCE: Patogenez, eksperimental'naya profilaktika i terapiya luchevykh porazheniy (Pathogenesis, experimental prevention, and therapy of radiation injuries); sbornik statey. Moscow, Izd-vo Meditsina, 1964, 233-247

TOPIC TAGS: radiation protection, radiation sickness, aliphatic compound, oxygen compound, methemoglobin

ABSTRACT: Assuming that the antioxidant and reducing properties of radiation protection compounds of bivalent sulfur are related to their ability to decrease the severity of radiation sickness, models using these properties were compared. It was established that not a single model, taken separately, was adequate for a biological method of selecting antiradiation agents; however, the results of tests of

Card 1/2

L 41617-65
ACCESSION NR: AT5008048

substances on several models can serve as an initial test for the selection of active substances. Aliphatic, oxygen, and methemoglobin models most fully reflect the potential radiation protection activity of substances. Orig. art. has: 8 tables.

ASSOCIATION: none

SUBMITTED: 19Aug64 ENCL: 00 SUB CODE: LS,OC

NO REF SOV: 002 OTHER: 023

Card 2/2

BACHINSKIY, P.Yu.; KUCHAKOVSKIY, M.S.; KATUYEV, B.V. [deceased]; SLAVACHEVSKAYA, N.M.; TANK, L.I.

Radioprotective action of thiazolidines. Radiobiologiia 4 no.2:266-269 '64. (MIRA 17:9)

1. Voyenno-meditsinskaya ordena Lenina Akademiya imeni Kirova, Leningrad.

KUSHAKOVSKIY, O.S.

Automatic "actographic" recording of motor activities in patients. Zhur. vys. nerv. deiat. 4 no.1:137-140 Ja-F '54. (MLRA 7:8)

1. Klinika obshchey khirurgii Chelyabinskogo gosudarstvennogo meditsinskogo instituta.

(MOVEMENT,
*automatic registration)

KUSHAKOVSKIY, O.S.

Plethysmograph with water transmission and ink recorder. Fiziol. zhur.41 no.4:584-586 Jl-Ag '55. (MLRA 8:10)

1. Klinika obshchey khirurgii Meditsinskogo instituta Chelyabinsk.
((PLETHYSMOGRAPHY, appratus and instruments,
plethysmography with water transmitter & ink pencil)

KUSHAKOVSKIY, O.S.

Modification of the absorbent action of the peritoneum in infectious processes following administration of antibiotics; experimental study. Khirurgiia no.5:27-30 My '56. (MLRA 9:9)

1. Iz kliniki obshchey khirurgii (zav. - prof. A.N.L'vov) Chelyabinskogo instituta (dir. - prof. G.D.Obraztsov)

(MICROCOCCAL INFECTION, experimental,
eff. of antibiotics on peritoneal absorp. in (Rus))
(ANTIBIOTICS, effects,
on peritoneal absorp. in exper. micrococcal infect. (Rus))
(PERITONEUM, effect of drugs on,
antibiotics, on absorp. rate in exper. micrococcal infect. (Rus))

KUSHAKOVSKIY, O.S.

Corrugated capsule for the pneumatic transmission of oscillations in physiological investigations. Fiziol. zhur. 42 no.6:518-520 Je '56. (MIRA 9:8)

1. Klinika obshchey khirurgii Chelyabinskogo meditsinskogo instituta.
(PLETHYSMOGRAPHY, apparatus and instruments, corrugated capsule for pneumatic transm. of oscillations (Rus))

KUSHAKOVSKIY, O. S., Candidate Med Sci (diss) -- "The complex use of antibiotics in treating patients with peritonitis". Ufa, 1959. 16 pp (Bashkir State Med Inst im 15th Anniversary VLKSM), 220 copies (KL, No 23, 1959, 172)

KUSHAKOVSKIY, O.S., kand.med.nauk

Single-stage parallel plethysmography in obliterating lesions of the vessels of the lower extremities. Sov.med. 26 no.8:28-32 Ag '62. (MIRA 15:10)

1. Iz kafedry obshchey khirurgii (zav. - dotsent P.M.Tarasov) Chelyabinskogo meditsinskogo instituta.
(PLETHYSMOGRAPHY) (BLOOD VESSELS--DISEASES)
(EXTREMITIES, LOWER--DISEASES)

KUSHAKOVSKIY, V.I.

USSR

2293. The accuracy of the Al_2O_3-SiO_2 equilibrium diagram.—P. P. Budnikov, S. G. Tresvyatskii, and V. I. Kushakovskii (*C.R. Acad. Sci. U.R.S.S.*, 93, 281, 1953). N.A.

Toropov and F. Ya. Galakhov (*Dok. Akad. Nauk*., 78, No. 2, 299, 1951) investigating the system Al_2O_3-SiO_2 in the region of high Al_2O_3 content, found that mullite melts without decomposing. Experiments made by N. F. Filonenko and I. V. Lavrov (*ibid.*, 89, No. 1, 141, 1953) did not confirm these findings. In attempting to settle this problem the present authors used high-temperature thermal analysis with a W-Mo thermocouple, which is claimed to be suitable for the purpose if very pure metal wire is used despite previous doubts in the literature; repeated heating of the W-Mo thermocouple gave maximum deviations of 20° C. Thermocouples were made of W and Mo wires 1·0 and 0·8 mm. dia. welded in an electric arc in a neutral gas atmosphere to prevent oxidation. During the investigation the thermocouples were protected by gas-tight magnesia tubes. The results of the investigation were microscopic and X-ray analyses were in agreement with those obtained by Toropov and Galakhov, i.e. that mullite melts without decomposing. (3 figs., 1 table.)

BUDNIKOV, P. P., TRESVYATSKIY, S. G., and KUSHAKOVSKIY, V. I.

"Binary Phase Diagrams: UO_2 - Al_2O_3, UO_2 - BeO, UO_2 - MgO.'

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 1958.

KUSHAKOVSKIY, V.I.

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pereversev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by O.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

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5(2)

AUTHORS: Budnikov, P. P., Corresponding Member AS USSR, SOV/20-128-1-22/58
Tresvyatskiy, S. G., Kushakovskiy, V. I.

TITLE: Investigation of Phase Transformation of Uranium Oxides in Air

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 85-88 (USSR)

ABSTRACT: In the present paper the decomposition of uranoso-uranic oxide occurring with heating was investigated, as there are only contradictory data on this problem (Refs 1-6). The decay temperature was determined by means of continuous weighing of uranoso-uranic oxide in tabloid form or pulverized during heating within the temperature range of room temperature up to 1600-1900°. The curves of change in weight of uranoso-uranic oxide on heating and cooling in air are given in figures 1 and 2. For the determination of phase composition at different temperatures hardened samples were used. The results of investigation are given in table 1. The results of two series of investigation indicated that uranoso-uranic oxide loses oxygen to a large extent already at 900°. However, up to 1450° the quantity of oxygen still corresponds to the formula $UO_{2.63}$. The radiogram taken of the oxide of this

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composition differs from the radiogram of U_3O_8. At still higher temperatures, up to the boiling point, U_4O_9 at atmospheric pressure is in equilibrium with oxygen. The oxygen content within this oxide decreases with temperature increase. This causes a lengthening of the lattice spacing (Fig 3). The results found made it possible to complement the high-temperature range for the phase diagram of the U-O system (Fig 4), plotted by Akkermann (Ref 2). The samples $UO_{2.093}$, $UO_{2.14}$, and $UO_{2.08}$ calcined within the vacuum (10^{-1} torr) at 1050, 1100, and 1600° proved to be two-phase and consisted of UO_2 and U_4O_9. However, it is possible that the two phases found by the authors during the decomposition of the solid solution have been formed due to too slow cooling. There are 4 figures, 1 table, and 6 references.

SUBMITTED: June 2, 1959

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5.4110,21.1330

TT-219
SOV/89-8-1-13/29

AUTHORS: Tresvyatskiy, S. G., Kushakovskiy, V. I.

TITLE: Melting Point Determinations in Air of Binary Mixtures of Uranium Oxides With Some Other Oxides. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 1, pp 56-58 (USSR)

ABSTRACT: An increased interest in interactions of uranium oxide with other oxides in air prompted this investigation. The authors used UO_2, BeO, MgO, $CaCO_3$, $BaCO_3$, Al_2O_3, La_2O_3, SiO_2, TiO_2, ZrO_2, ThO_2, CeO_2, H_3PO_4, V_2O_5, Ta_2O_5, Bi_2O_3, Cr_2O_3, $(NH_4)_2MoO_4$, H_2WO_4, Fe_2O_3, and $MnCO_3$, most of them classified as pure, analytically pure, and chemically pure. The degree of purity of Ta_2O_5 and V_2O_5 was not certain. Equimolar ratio was taken, except in case of oxides of Mg, Ca, Sr, and Ba where additional 1:2 and 2:1 molar ratio mixtures were prepared. The mixtures were first heated in porcelain

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Melting Point Determinations in Air of Binary Mixtures of Uranium Oxides With Some Other Oxides. Letter to the Editor

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containers at 800° C, and formed into briquets 25 mm in diameter, and then roasted at 800-900° C. The briquets were afterwards pulverized and the procedure repeated at 1,000-1,100° C and 1,200-1,300° C in platinum containers. At 1,300° C the procedure was repeated until the briquets looked stable, showed no cracks, and did not shrink. Determination of the melting temperature of mixtures. Except for mixtures which melted during preliminary roasting, the melting temperature was determined by method of cone deformation. The cone vertex was heated in electrical arc maintained between carbon electrodes. Temperature measurements were taken with a microoptical pyrometer with an accuracy of ±30-50° C for specimens forming a droplet, and ±50-100° C for those melting along the surface with a hard to obtain droplet. Results are listed in Table A. There is 1 table, and 1 Soviet reference.

SUBMITTED: August 3, 1959

Card 2/5

Melting Point Determinations in Air of Binary Mixtures of Uranium Oxides With Some Other Oxides. Letter to the Editor

77219
SOV/89-8-1-13/29

Melting temperatures in air of binary mixtures of uranium oxides with other oxides

Composition, mol %		U/Me ratio from chemical analysis *	Melting temperature in °C	Melting mode
Charge				
UO_2	Other oxide			
50	50 BeO	1/1,5	2200 ± 50	Melts with difficulty, almost no droplets
67	33 MgO	1/0,56	1900 ± 50	Droplets form with difficulty
50	50 MgO	1/1,12	1750 ± 50	Melts with droplet formation
33	67 MgO	1/1,53	1850 ± 30	Same
70	30 CaO	1/0,404	2000 ± 50	" "
50	50 CaO	1/1	2000 ± 50	" "
30	70 CaO	1/2,35	2200 ± 100	No droplets, surface melting
67	33 SrO	1/0,4	2000 ± 50	Same
50	50 SrO	1/0,93	2100 ± 50	" "
33	67 SrO	1/2,37	2200 ± 50	Melts with droplet formation

Card 3/5 * See note Card 5/5

Melting Point Determinations in Air of Binary Mixtures of Uranium Oxides With Some Other Oxides. Letter to the Editor

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SOV/89-8-1-13/29

Composition, mol %		U/Me ratio from chemical analysis *	Melting temperature in °C	Melting mode
Charge				
UO_2	Other oxide			
67	33 BaO	1/0,54	1700 ± 30	Same
50	50 BaO	1/1,03	1700 ± 50	" "
33	67 BaO	1/1,9	1680 ± 50	Droplets are formed but not as easily as in the previous mixture
50	50 Al_2O_3	—	1940 ± 30	Melts with droplet formation
50	50 La_2O_3	1/1,6	2350 ± 10	Droplets form with difficulty
50	50 SiO_2	1/1	1770 ± 30	Surface melting
50	50 TiO_2	—	1480 ± 30	Melts easily
50	50 ZrO_2	—	2000 ± 50	Melts with difficulty, almost no droplets
50	50 ThO_2	—	Ho measurem	—
50	50 CeO_2	—	2700 ± 150	Almost does not melt; welds to the electrodes
50	50 P_2O_5	—	1200 ± 1350	Sample melted during preliminary roasting

Card 4/5 * See note Card 5/5

Melting Point Determinations in Air of Binary Mixtures of Uranium Oxides With Some Other Oxides. Letter to the Editor

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Composition, mol %			Melting temperature in °C	Melting mode
Change		U/Me ratio from chemical analysis *		
UO_2	other oxide			
50	50 V_2O_5		~800	Some
50	50 MoO_3		900 - 1000	" "
50	50 WO_3		1100 - 1200	" "
50	50 Ta_2O_5	--	1850 ± 30	Melts easily
50	50 Bi_2O_3	--	1800 ± 50	Melts softly, evaporates strongly during heating
50	50 PbO_2	--	1850 ± 50	Some
50	50 SnO_2	-	-	Does not melt in the arc, strong evaporation observed
50	50 Cr_2O_3	--	2050 ± 100	Droplets form with difficulty
50	50 Fe_2O_3	-	1370 ± 30	Melts easily
50	50 MnO_2		1650 ± 30	" "
100	Her	--	2700 - 2750 ± 100	Difficult to melt

* In cases where chemical analysis was not performed, changes in chemical constitution were practically negligible, with the exception of mixtures with oxides of bismuth, lead and tin.

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S/080/62/035/010/002/012
D204/D307

AUTHORS: Budnikov, P.P. and Kushakovskiy, V.I.

TITLE: The Al_2O_3 - SiO_2 system

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 10, 1962, 2146-2156

TEXT: The above system was studied to complement the published data. The liquidus temperatures were calculated theoretically for the systems Al_2O_3 - SiO_2, $2Al_2O_3 \cdot SiO_2$ - SiO_2 and $3Al_2O_3 \cdot 2SiO_2$ - SiO_2 and were measured for mixtures containing 100 - 10 wt. % Al_2O_3, by high temperature thermal analysis. The shape of the heating and cooling curves is discussed. Compositions of 50 - 100% Al_2O_3 were essentially at equilibrium, while those of 10 - 30% Al_2O_3 showed supercooling. The liquidus temperatures were considerably lower than those found by Bowen and Greig. Microscopic and X-ray analyses showed the following phases to be present: 100 - 95

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S/080/62/035/010/002/012
D204/D307

The Al_2O_3 - SiO_2 system

Al_2O_3 - corundum; 90- 78 Al_2O_3 - dendritic corundum; 76 - 71.8 Al_2O_3 - mullite with increasing amount of glass; 60 - 50 Al_2O_3 - dendritic and acicular mullite in a glassy matrix. Corundum crystallized out first when 100 - 79 wt % Al_2O_3 samples were cooled, and mullite was first when the Al_2O_3 content fell to 77.5 - 30%, by weight. The crystallization of various mixtures is discussed. The minimum quantity of glass corresponds to the composition $2Al_2O_3 \cdot SiO_2$; the glass content increases slowly when Al_2O_3 is lowered from 77 to 68%, and rises rapidly when Al_2O_3 is lowered from 68 to 60%. From samples containing 68 - 76% Al_2O_3 mullite crystallized out at 1850 - 1870°C, showing it to be stable up to the m.p.; the same crystallized at 1825°C from a composition of 60% Al_2O_3. The mullite-corundum eutectic, containing 78% Al_2O_3, melted at ~ 1840°C. Compositions containing 69 - 70% Al_2O_3 were heated at 1830°C over 1 - 8 hours and quenched. The exterior layer consisted of finely crystalline corundum, while the center was mullite and glass; mullite decomposes at the above temperature, with loss of silica by volatilization. On heating a mixture of SiO_2 and Al_2O_3 (10% of the

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The Al_2O_3 - SiO_2 system

latter by weight), a liquid phase was first observed at 1550°C, corresponding to the eutectiv of Bowen and Grieg. A 10% Al_2O_3 mixture of mullite and silica began, however, to melt only at 1640°C, in fair agreement, with the theoretical m.p. The phase diagrams of the whole system is shown in Fig. 9. It is clear that aluminosilicate refractories may operate at higher temperatures if the main phases are silica and mullite. There are 9 figures and 2 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Moscow Institute of Chemical Technology im. D.I. Mendeleyev)

SUBMITTED: March 22, 1962

Card 3/4

L 13866-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACC NR: AP6002427 SOURCE CODE: UR/0020/65/165/005/1075/1077

AUTHOR: Budnikov, P. P. (Corresponding member AN SSSR); Kushakovskiy, V. I.; Belevantsev, V. S.

41

ORG: none

TITLE: Investigation of the Gd_2O_3-Al_2O_3 and Sm_2O_3-Al_2O_3 systems

SOURCE: AN SSSR. Doklady, v. 165, no. 5, 1965, 1075-1077

TOPIC TAGS: rare earth, samarium, gadolinium, alloy system, alloy phase diagram

ABSTRACT: The authors study the interaction between aluminum oxide and the oxides of samarium and gadolinium below the solidus temperature. Mixtures were prepared by coprecipitation of ammonium from a nitric acid solution of aluminum and gadolinium (samarium) hydroxides with subsequent annealing at various temperatures. A table is given showing data from x-ray phase analysis of these mixtures. The results show that the reaction for formation of $SmAlO_2$ ends at 880°. In the Gd_2O_3-Al_2O_3 system, formation of the compound $GdAlO_3$ passes through a new phase with an unknown structure. Traces of this phase remain even after annealing at 1380°. An-

UDC: 541.123.25

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L 13866-66
ACC NR: AP6002427

alysis of the specimens showed that aluminum oxide is not noticeably soluble in $GdAlO_3$ and $SmAlO_3$. It was found that new chemical compounds are formed in annealed alloys containing more than 50 mol % of rare earth oxide. Microstructural analysis shows that a single phase structure arises in compositions containing about 66 mol % of the rare earth oxide. The composition of the new compounds give chemical formulas of $2Gd_2O_3 \cdot Al_2O_3$ and $2Sm_2O_3 \cdot Al_2O_3$. These compounds melt and decompose at 1950° and 1920° respectively. X-ray analysis of the newly synthesized compounds shows that the formation of $GdAlO_3$ perovskite at low temperatures passes through the 2:1 phase. The new compounds have no noticeable region of homogeneity. Both the 1:1 and 2:1 phases are in equilibrium in the range of compositions containing 50-66 mol % of the rare earth oxide. Phase diagrams are given for the Gd_2O_3-Al_2O_3 and Sm_2O_3-Al_2O_3 systems. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: 26Jun65/ ORIG REF: 002/ OTH REF: 004

Card 2/2 mc

L 29797-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG/GG
ACC NR: AP6015064 (A) SOURCE CODE: UR/0363/66/002/005/0829/0832

AUTHOR: Budnikov, P. P.; Kushakovskiy, V. I.; Sandulov, D. B.; Butra, F. P.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Growing of beryllium oxide single crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 829-832

TOPIC TAGS: beryllium compound, single crystal growing, crystallization

ABSTRACT: Beryllium oxide single crystals were grown by the vaporization-condensation method in a stream of moist air at 1400-1600°C. The crystals obtained had various forms (prisms, whiskers, plates). X-ray analysis revealed that the direction of growth of prismatic and filamentary crystals coincides with the direction of crystallographic axis c. High-temperature thermal tests showed that single crystals heated up to 1970, 2000, and 2100°C retained their form and transparency. X-ray diffraction showed that crystals heated to 2200°C lost their transparency and cracked due to the presence of discrete disoriented blocks in place of the single

Card 1/2 UDC: 556.45:548.55

L 29797-66

ACC NR: AP6015064 O

crystal. Crystallization of fused beryllium oxide from 2450-2500°C produced coarse (2 × 2 × 2 mm), transparent grains which x-ray diffraction data identify as pseudo-crystals. The disorientation of the blocks in the crystals is apparently due to a polymorphic transformation of beryllium oxide taking place during cooling of the single crystals. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20,11 / SUBM DATE: 02Aug65/ ORIG REF: 001/ OTH REF: 004

Card 2/2 fv

1. KUSHAREV, V. A.

2. USSR (600)

4. Agriculture

7. Care of ships of fishing industry and their repair with shipping funds. Moskva, Pishchepromizdat, 1951.

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

KUSHASHVILI A. L.

Kushashvili, A. L.- "Infectious asplactia of Georgian sheep," Trudy Gruz. nauch.-issled. vet. opyt. stantsii, Vol. X, 1948, p. 91, 96, (Resume in Georgian)

SO: U-4094, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

KUSHASHVILI, A. L.

Kashoshvili, A. L. "The use of oflavin as a preventative in piroplasmosis of sheep," Trudy Gruz. nauch.-issled. vet. opyt. stantsii, Vol. X, 1948, p. 121-25, (Resume in Georgian)

SO: U-4734, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949 .

KUSHASHVILI, A. L.

Kushashvili, A. L.- "On the treatment of skin diseases with the solution of sulfurated lime," Trudy Gruz. nauch.-issled. vet. opyt. stantsii, Vol. X., 1948, p. 169-72, (Resume in Georgian)

SO: U-1934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

KUSHASHVILI, A.L., Vet.
"Bacteriophage as a medicinal agent against pullorosis of chicks."
SO: Vet. 27 (8) 1950, p. 26

KUSHASHVILI, A.[L.]

KUSHASHVILI, A.: Fowl plague and the measures against it (a memorandum). Tbilisi. Publication of the Georgian Agricultural Institute. 1952. 11 pages. (Ministry of Agriculture, Georgian SSR, Administration of Agricultural Propaganda). Free. 10,000 copies.

SO: Veterinariya; 30; (1); January 1953; Uncl. TASCON

82285

S/089/60/009/01/09/011
B014/B070

18.1215

AUTHORS: Tresvyatskiy, S. G., Kushakovskiy, V. I., Belevantsev, V. S.

TITLE: Investigation of the Systems BeO - Sm_2O_3 and BeO - Gd_2O_3

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 1, pp. 54-55

TEXT: The starting materials for the preparation of the sample had a purity of 99.5 to 99.9 %. The temperatures of still liquid and already solidified melts contained in a molybdenum crucible were measured by means of a tungsten-molybdenum thermocouple. By a chemical analysis of the slowly crystallizing alloy, the composition of the eutectic was determined. The analysis shows that the composition of the alloys is not different from that of the layers. Microstructural analyses of molten samples indicate that in the hypoeutectic alloys beryllium oxide crystallizes first while in the hypereutectic alloys samarium and gadolinium oxides do so first. If the lattice constants of beryllium in thermally treated alloys containing oxides of rare earths are measured,

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Investigation of the Systems BeO - Sm_2O_3 and BeO - Gd_2O_3

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no solid solutions are found in beryllium oxide. The eutectics contain 35 mole % of samarium or gadolinium oxide and 65 mole % of beryllium oxide. The phase composition of the samples that contained much Sm_2O_3 and Gd_2O_3 could not be determined roentgenographically. Samples that contained 0.5 or more mole % of beryllium oxide and were annealed between 1300°C and 1500°C showed two distinct phases in reflected light. This supports the theory that in the systems BeO - Sm_2O_3 and BeO - Gd_2O_3 in the temperature range 1300-1500°C solid solutions do not occur in the oxides of rare earths. The phase diagrams of the above systems are reproduced in Figs. 1-3. The melting points of the eutectics of these systems are lower than those of the system BeO - La_2O_3. There are 3 figures and 3 references: 2 Soviet and 1 German.

SUBMITTED: January 7, 1960

Card 2/2

82957
S/089/60/009/003/009/014
B006/B063

5.4110

AUTHORS: Tresvyatskiy, S. G., Kushakovskiy, V. I., Belevantsev, V. S.

TITLE: Investigation of the Al_2O_3 - Sm_2O_3 and Al_2O_3 - Gd_2O_3 Systems

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 3, pp. 219-220

TEXT: In the introduction to the present "Letter to the Editor", the writers discuss the results of other authors who have studied the systems mentioned in the title. The main part deals with experimental determinations of the solidus and liquidus temperatures of these systems between 1700° and 2550°C. For this purpose, the authors used the high-temperature thermal analysis according to the method described in Refs. 4 and 5. Sm_2O_3 and Gd_2O_3 with not more than 0.5% impurities (other oxides of rare earths), and Al_2O_3 of the type ЧДА(ChDA) served as starting materials. The thermal analysis indicated the following: The eutectic (Al_2O_3-Sm_2O_3)

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Investigation of the Al_2O_3 - Sm_2O_3 and Al_2O_3 - Gd_2O_3 Systems

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melts from the side of Al_2O_3 at 1770 ± 20°C (Fig. 1), while that of the Al_2O_3 - Gd_2O_3 system starts melting at 1760 ± 20°C (Fig. 2). From the side of the rare-earth oxides, the eutectics reach their melting points at 1860 ± 20°C and 1950 ± 20°C, respectively. The compounds $SmAlO_3$ and $GdAlO_3$ melt practically at the same temperature, namely, 2060 ± 20°C. A microstructural analysis after the thermal analysis (in reflected light) showed that in alloys having 0 - 20 mole% of rare-earth oxides Al_2O_3 crystallized first; at 25 - 70 mole% $SmAlO_3$ or $GdAlO_3$; and at 75 - 100 mole% Sm_2O_3 or Gd_2O_3. Eutectics were found between 20 and 25 mole% (low-melting eutectic) and between 70 and 75 mole% of rare-earth oxides (high-melting eutectic). Samples containing more than 1 or less than 99 mole% of such oxides were found to be two-phase substances. The invariant points of the two systems investigated (above 1700°C) are listed in a table and compared with the data published in Ref. 3. The

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Investigation of the Al_2O_3 - Sm_2O_3 and Al_2O_3 - Gd_2O_3 Systems

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numbering of the points corresponds to that of Figs. 1 and 2. The results obtained by the authors partly agree with those of Ref. 3. There are 4 figures, 1 table, and 5 references: 2 Soviet, 2 US, and 1 British.

SUBMITTED: March 24, 1960

Card 3/3

TRESVYATSKIY, S.G., KUSHAKOVSKIY, V.I., BELEVANTSEV, V.S.

High-temperature thermal analysis using tungstic molybdenum thermocouples. Ogneupory 25 no.4:180-181 '60. (MIRA 13:8)
(Thermocouples)

KUSHASHVILI, L.A.

Study of structural and some histochemical changes in the adrenal cortex of elderly, old, and very old people. Soob. AN Gruz. SSR 39 no.2:451-458 Ag '65. (MIRA 18:9)

1. Institut eksperimental'noy morfologii imeni Natishvili AN GruzSSR. Submitted February 16, 1965.

K[illegible]CHASHVILI, I.A.

Structural changes in the [illegible] physis [illegible] and senile age and in longevity. [illegible] 64. [illegible] 18:?)

1. Institut eksperimental'no[illegible] [illegible] [illegible] April 27, 1964.

KUSHAVIN, M.I.

Oil filtration by centrifuging. Avt. trakt. prom. no.12:28-29 D '53. (MLRA 6:12)
(Oil reclamation)

KUSHAVIN, M.P., inzh.

Basic tasks in the standardization of the design of articles manufactured by the tractor industry. Trakt. i sel'khozmash. 32 no.12:14-15 D '62. (MIRA 16:3)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktornyy institut. (Tractor industry)

Kushayeva, R.I.

32-11-33/60

AUTHORS: Kushayeva, R.I., Kungurova, A.V.

TITLE: Examples for the Application of the Method of Computed Diagrams in the Spectral Analysis of Sharp Cutting Steels and Bronze of the Type A Ж-9-4 (Opyt primeneniya metoda raschetnykh grafikov pri spektral'nom analize bystrorezhushchey stali i bronz A Ж-9-4)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1357-1360 (USSR)

ABSTRACT: In this case the method of computed diagrams developed by I.S.Fishmann was used. Analysis was carried out in the usual way by means of the spectrograph "ИСП -22", the generator "ИГ -2" with a 3-lens condenser system. The inclination of the graduation curve was computed according to the formula: $tg\alpha_{background} = \gamma k \beta b$, where $tg\alpha_{background}$ is an angle coefficient of the graduation curve, γ - contrast factor of the film, β - multiplier of the dilution of the base, and k.- the background coefficient. The factor γ was determined according to the spectrogram on the basic film by the application of a 9-step reducer. For the determination of the basic film coefficient k, which was exposed double as long, the spectra of the standard samples used for testing were recorded, and eventually the spectral lines of the

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32-11-33/60

Examples for the Application of the Method of Computed Diagrams in the Spectral Analysis of Sharp Cutting Steels and Bronze of the Type A ЖС -9-4

elements to be determined were photometrized by way of a background scale. The coefficient β was computed according to the formula $\beta = 1 + \frac{c}{c_{basis}}$, where c denotes the required component and c_{basis} denotes the basic component of the alloy. The coefficient of the reabsorption b was assumed to be equal to 1 for the case that the excitation potential, computed according to the formula: $E_{lower} = E_{upper} - \frac{12395}{\lambda}$ is above zero. As an example for the application of the suggested method the solution of the two following problems is given: 1. Computation of the angle of inclination of the graduation curve on the basis of the determination of the tungsten content according to the line 2397.09 Å. 2. Computation of the angle of inclination of the graduation curve based upon determination of the silicon content in sharp cutting steel according to the line 2516.12 Å. For the control of these methods chemical and spectral methods were used at the same time. (According to the table given, the possible

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Examples for the Application of the Method of Computed Diagrams in the Spectral Analysis of Sharp Cutting Steels and Bronze of the Type A)H -9-4

error, in the case of the chemical method being accepted, was less than 5%). In the same way, comparisons of the inclination of the graduation curve attained by the application of standards with computed curves showed only insignificant differences in inclination. There are 2 figures, 5 tables, and no references.

AVAILABLE: Library of Congress

Card 3/3

BRODSKIY, V.Ya.; KUSHCH, A.A.

Variation of the number of polyploid cells in the postembryonic development in rats. Dokl. AN SSSR 147 no.3:713-716 N '62. (MIRA 15:12)

1. Institut morfologii zhivotnykh im A.N. Severtsova AN SSSR i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Polyploidy)

BRODSKIY, V.Ya.; KHRUSHCHOV, N.G., KUSHCH, A.A.

Irregularity of the process of premitotic reduplication of DNA in mammalian cells; cytospectrophotometric data. Biul. eksp. biol. i med. 57 no.3:94-97 Mr '64.

(MIRA 17:11)

1. Institut morfologii zhivotnykh imeni A.N. Severtsova (dir. - doktor biologicheskikh nauk M.S. Mitskevich) AN SSSR, Institut morfologii cheloveka (dir. - chlen-korrespondent AMN SSSR prof. A.P. Avtsyn) AMN SSSR, kafedra gistologii (zav. - prof. G.I. Roskin) Moskovskogo gosudarstvennogo universiteta imeni Lomonosova. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

KUSHCH, A.A.; YARYGIN, V.N.

Polyploidy of mono- and binucleate neurons in the upper cervical ganglion of rabbits. TSitologiia 7 no.2:228-233 Mr-Ap '65. (MIRA 18:7)

1. Laboratoriya tsitologii Instituta morfologii zhivotnykh AN SSSR, kafedra tsitologii i gistologii Moskovskogo universiteta i kafedra gistologii 2-go Moskovskogo meditsinskogo instituta.

KUSHCH, A.A.

Polyploidization of ganglionic neurons in the retina under the influence of an increased functional load. TSitologiia 7 no.6:742-745 N-D '65. (MIRA 19:1)

1. Laboratoriya tsitologii Instituta morfologii zhivotnykh AN SSSR i Kafedra tsitologii i gistologii Moskovskogo universiteta. Submitted April 2, 1965.

KUSHCH, A.I. (Kremenchug, ul. Voroshilova, d. 54/1)

Stomach cancer which developed 25 years after gastroenterostomosis. Nov. khir. arkh. 5:110-111 S-O '58. (MIRA 12:1)

1. Kremenchugskiy onkologicheskiy dispanser.
(STOMACH--CANCER)

KUSHCH, A.I. (Kremenchug, ul. 40-letiya Oktyabrya, d.54, kv.1)

Fibroadenoma of the carotid gland. Nov.khir.arkh. no.6:95-96 N-D '59. (MIRA 13:4)

1. Kremenchugskiy onkodispanser.
(CAROTID BODY--TUMORS)

ACC NR: AT7001522 (A) SOURCE CODE: UR/3117/65/000/006/0070/0087

AUTHORS: Zimin, N. V. (Engineer); Kushch, E. V. (Engineer); Sergeyeva, K. I. (Engineer); Smirnov, V. I. (Engineer)

ORG: none

TITLE: Development of the heat treatment process for the planet pinions of tractor K-700

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut tokov vysokoy chastoty. Trudy, no. 6, 1965. Promyshlennoye primeneniye tokov vysokoy chastoty (Industrial application of high-frequency current), 70-87

TOPIC TAGS: metal heat treatment, transmission gear ~~manufacture~~, tractor / K-700 tractor

ABSTRACT: In view of the mass production of tractor K-700, a practical and efficient method of heat treating the planet pinions was developed. The heating and cooling method for the production heat treatment is described (see Fig. 1), and the effects of changed heater geometry and cooling spray parameters on the hardened zone geometry are discussed. Curves of the cooling rates as a function of temperature and of cooling time are presented for the hardened regions. The hardness profiles are also included. A table of the production heat treatment parameters is given, and the experimental results on the dimensional effects of the heat treatment process are presented and discussed. In 1964 21 000 gears were successfully heat-treated by this method. It is suggested that this method can be applied to other types of gears.

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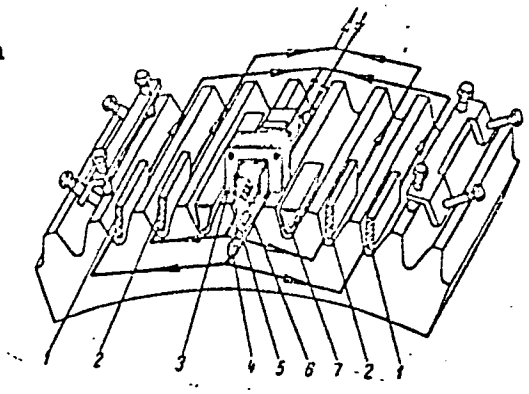
ACC NR: AT7001522

Fig. 1. Inductor configuration for pinion heat treatments: 1 and 2 - return wires; 3 - regulating magnetic circuit; 4 and 6 - active induction coils; 5 - magnetic path; 7 - cooling sprayers



Orig. art. has: 3 tables, 10 formulas, and 12 figures.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005

Card 2/2

S/182/60/000/002/002/012
A161/A029

AUTHORS: Polovnikov, V.V.; Kushch, E.V.

TITLE: Practical Use of Gear Rolling in Mass Production

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 2, pp. 4 - 8

TEXT: The "Krasnyy metallist" Plant in Konotop was the first to use rolling for gears of less than 100 mm in diameter and 1.5 module; now the Khar'kovskiy traktornyy zavod im. Ordzhonikidze (Khar'kov Tractor Plant im. Ordzhonikidze) and the ChTZ are using it also for larger gears. The article contains detailed information on the process and a brief illustrated description of the machines. The method is 5 - 10 times more productive than cutting, the gears are more durable, less metal is needed and no expensive milling cutters are required. The principle is rotation of gear blanks in mesh with cogged rolls, squeezing metal out of grooves and forming teeth. Two machine types are known (Ref. 1), viz., rack type and roll type, but the roll type only is used at the time being. In the ЦКБММ-22 (TsKBMM-22) machine of the Konotop Plant (Fig. 3, kinetic diagram) gear blanks are forced axially between rotating rolls, only small gears can be produced, and the accuracy is not above "class 4". The ChTZ has a ЦКБММ-13

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(TsKBMM-13) machine with radial rolls feed and no axial blank feed; the accuracy obtained with 7 mm module gears is also "class 4". The Khar'kov Tractor Plant in cooperation with NII TVCh im. Professor V.P. Vologdin improved the accuracy by dividing the process into two stages: hot plastic deformation and cold finishing rolling (with 0.05 mm allowance on tooth flank for cold rolling) (Ref. 2). The Khar'kov Plant, abbreviated XTZ (KhTZ), produced a hot-rolling machine (described in Ref. 3), and a cold-finishing machine, and beginning with 1957, tractor gears of 5 mm module were obtained with an accuracy of the 2nd and 3rd class. The hot XTZ-296 (KhTZ-296) is illustrated in Figure 5. It works with radial feed of rollers and differs from the TsNIITMASh system machine (Fig. 4) by having one cogged and one smooth roll, rolls for the butt faces, and hydraulic drive for tool rests. Gears rolled over on butt sides are ready without further machining. The cold-finishing XTZ-298 (KhTZ-298) machine (Fig. 6) has one cogged roll, no smooth roll and no butt rolls. The KhTZ hot and cold machine accommodates 200 - 500 mm in diameter gears with a maximum module of 7 mm and a maximum width of 70 mm. The article includes the method used for calculating the roll tooth dimensions (Fig. 7). This method is not yet finally established, and further investigations are necessary, for it appears that the addendum shape is detrimental to the durability of rolls, and the generating angles (20 and 19°) are selected

Practical Use of Gear Rolling in Mass Production

at random. First-class accuracy of rolls appears to be not justified, for the accuracy of gears produced with them is not higher than 3rd class, and it seems that other factors than the generating roll accuracy are also involved. Gear blanks are heated for hot rolling by a sector-shaped induction heater (Fig. 9) to 1,100- - 1,200°C. The entire hot rolling process beginning with pressing a push button to lower the heater on the blank lasts 48 sec (Table 2). A photo (Fig. 10) shows a hot-rolled gear. Even the improved hot-rolling machine does not produce gears with stable 2nd - 3rd accuracy class due to warping, and further improvement must be sought in design improvement of the cold-rolling machine. Graphite lubrication and rounded-up roll tooth addendum had a positive effect on the flow of metal that was not satisfactory in the beginning. Only after an investigation carried out in 1957 by Yu.A. Fedorov with screwed in steel pins (Fig. 11) it was established that the tooth space of the roll must be deeper (0.75 mm deeper) so as not to restrict the flow of metal on the blank to the addendum tops. There are 11 figures, 3 tables and 5 Soviet references.

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L 12890-63 EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HW
ACCESSION NR: AP3001424 S/0136/63/000/006/0084/0085

60

AUTHOR: Kushch, E. V.; Ivanov, V. K.; Denisov, Ye. L.

TITLE: Draw plate with adjustable roll section for drawing rectangular cross section tubing 16

SOURCE: Tsvetny*ye metally*, no. 6, 1963, 84-85

TOPIC TAGS: draw plates, roll sections, tubing

ABSTRACT: Authors describe a new type of draw plate with adjustable roll section used for drawing tubing, and which is intended for small scale production. Machine is described in enclosure. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 09Jul63 ENCL: 02

SUB CODE: 00 NO REF SOV: 000 OTHER: 000

Card 1/3

KUSHCH, I.I.; DUGINA, N.A., tekhnicheskiy redaktor

[Work practice of assembly mechanics at the Urals' Chemical Machinery Plant] Opyt slesarei-sborshchikov Uralkhimmashzavoda. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 15 p. [Microfilm] (Machinery--Construction) (MLRA 8:2)

VEDERNIKOV, Lev Alekseyevich; KUSHCH, L.K., redaktor; TIKHONOVA, Ye.A., tekhnicheskiy redaktor [redacted]

[Problems in the prevention of ship collisions at sea] Zadachnik po voprosam preduprezhdeniia stolknovenii sudov v more. Moskva, Izd-vo "Morskoi transport," 1955. 101 p. (MLRA 8:7)
(Collisions at sea--Prevention)

KUSHCH, L., kapitan dal'nego plavaniya

Ship collision prevention for navigation in fog. Mor.flot 15 no.5:9-12 My '55. (MLRA 8:6)
(Fog signals) (Collisions at sea--Prevention)

KUSHCH, L.

The use of marine radar stations in ship navigation. Mor.flot 15 no.12:7-10 D '55. (MLRA 9:3)

1. Ispolnyayushchiy obyazannosti glavnogo shturmana Glavnogo upravleniya po besopasnosti moreplavaniya Ministerstva morskogo flota.

(Navigation) (Radar)

KUSHCH, L., Kapitan dal'nego plavaniya.

Important conditions for successful fall and winter navigation.
Mor. flot 16 no.12:4-5 D '56. (MLRA 10:2)

1. Upravleniye Glavmorrevizora Ministerstva morskogo flota.
(Navigation--Cold weather conditions)
(Ships--Maintenance and repair)

KUSHCH, L.

Develop and improve the technical means and methods of ship handling. Mor.flot 17 no.5:8-11 My '57. (MLRA 10:7)

1. Glavnyy shturman Upravleniya glavnogo revizora po bezopasnosti moreplavaniya Ministerstva morskogo flota.
(Ship handling)

BEKMAN, Al'fred Andreyevich; ROSTISLAVINA, K.V., red.; SUTYRIN, M.A., retsenzent; KUSHCH, L.K., retsenzent; ALEKSEYEV, V.I., red. izd-va; TSVETKOVA, S.V., tekhn. red.

[Manual for ship handlers in inland navigation] Posobie dlia sudovoditelia ozernogo plavaniia. Izd.2., dop. i perer. Moskva, Izd-vo "Rechnoi transport," 1958. 185 p. (MIRA 11:8)
(Inland navigation) (Ship handling)

BEKMAN, Al'fred Andreyevich; RABINOVICH, M.M., retsenzent; KUSHCH, L.K., red.; MAKRUSHINA, A.N., red.izd-va; BOBROVA, V.A., tekhn.red.

[Manual on the use of nautical instruments] Rukovodstvo po ekspluatatsii shturmanskikh priborov. Moskva, Izd-vo "Rechnoi transport," 1959. 117 p. (MIRA 13:2)
(Nautical instruments)

KUSHCH, L. K.

RUL'KOV, Dmitriy Ivanovich; SARATOV, Vladimir Fadeyevich; SHUMEYKO, G.K., retsenzent; KONSTANTINOV, V.P., retsenzent; KUSHCH, L.K., red.; LOBANOV, Ye.M., red.izd-va; BOBROVA, V.A., tekhn.red.

[Nautical equipment of ships for inland navigation] Navigatsionnoe oborudovanie sudov vnutrennego plavaniia. Moskva, Izd-vo "Rechnoi transport," 1959. 127 p. (MIRA 13:1)
(Inland navigation) (Nautical instruments)

KUSHCH, L.

"Don" radar units. Mor. flot 19 no.5:31-33 My '59.
(MIRA 12:7)

1.Glavnyy shturman Ministerstva morskogo flota.
(Radar in navigation)

KUSHCH, L.K.

Using the self-recording NEL-4 echo sounder for measuring depths over 500 meters. Ryb. prom. no.51:3-4 '59. (MIRA 15:9)

1. Glavnyy shturman Glavmorrevizora.
(Deep-sea sounding) (Sonar)