ORCHANSKIY, D.L.; PAVLENKO, V.A.

International congress on mensuration and automation in Dusseldorf. [Trudy] LO NTO Priborprom. no.4:198-211 '59.
(MIRA 13:2)
(Mensuration--Congresses) (Automation--Congresses)

TARASOV, V.P., tekhnik; ORCHINSKIY, B.Ya., tekhnik, brigadir po remonty dizeley M753

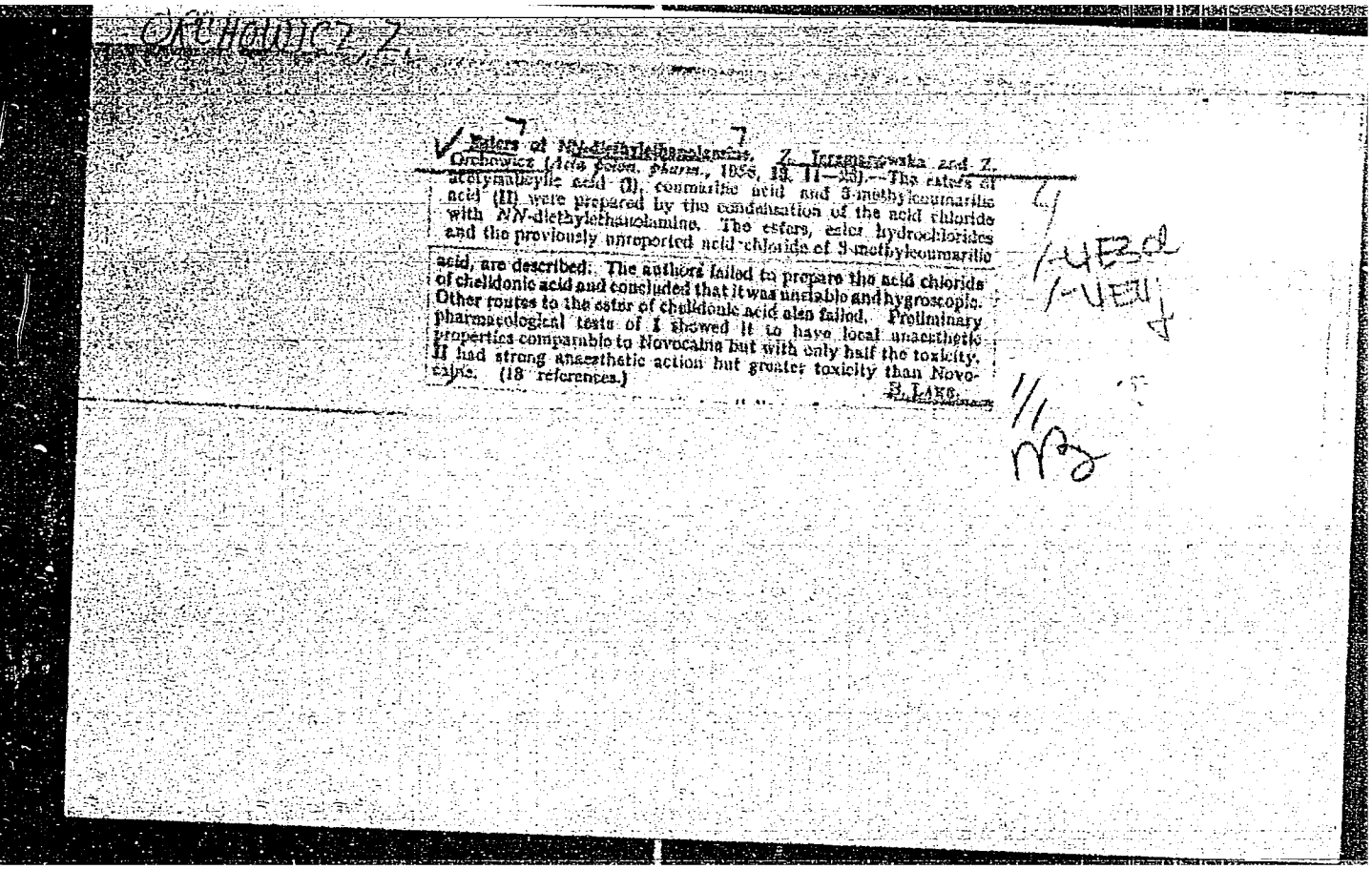
Some improvements of the TGM3 diesel locomotive. Elek. i tepl.tiaga 6 no.8:23-24 Ag '62. (MIRA 17:3)

1. Mashinist-instruktor teplovoznogo depo Tashkent (for Tarasov).

ORCHKO, A. I.

Epik, P. A. and Orchko, A. I. "The solubility of mercury sulfide in bromides and chlorides," Izvestiya Kizel'sk. politekhn. in-ta, Vol VIII, 1958 (on cover: 1957), p. 1

SO: U-5241, 17 December 1958, (Letopis 'Zhurnal'nykh Statey, [illegible])



ORCHOWICZ Z.

Esters of NN-diethylethanolamine. Z. Jarmułowska and Z. Orchowicz (Acta Polon. Pharm., 1958, 15, 11—20).—The esters of acetylsalicylic acid (I), coumarilic acid and 3-methylcoumarilic acid (II) were prepared by the condensation of the acid chlorides with NN-diethylethanolamine. The esters, ester hydrochlorides and the previously unreported acid chloride of 3-methylcoumarilic acid, are described. The authors failed to prepare the acid chloride of cheildonic acid and concluded that it was unstable and hygroscopic. Other routes to the ester of cheildonic acid also failed. Preliminary pharmacological tests of I showed it to have local anaesthetic properties comparable to Novocaine but with only half the toxicity. II had strong anaesthetic action but greater toxicity than Novocaine. (18 references.)

S. Lake.

ORCZEWSKI, J.

ORCZEWSKI, J. Requirements for fish refrigerating plants. p. 17.
GOSPODARKE RYBNA Warszawa, Poland. Vol. 8, No. 3, Mar. 1956

SOURCE: East European Accessions List (EEAL) LC Vol. 5, No. 6, June 1956

ORCZIFALVI, Laszlo; SZELECSENYI, I. [illegible]

More attention should be paid to the issuance of waybills and their accounting by railroad stations. Vasut 13 no.11: 26-27 N '63

ORCZYK, M.

"Mine Waters." p.61
"Communique of the Department of Normalization of the Central Institute of Mining." p.63
(PRZEGLAD GORNICZY Vol. 10, no. 2, Feb. 1954 Katowice, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954 Uncl.

ORCZYK, M.

Losses of coal due to the loss of coa washings. p. 143
(GORNICTWO No. 3, 1956, Krakow, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

ORCZYK, Michal, mgr.

Corrosiveness of mining water. Przegl gorn 17 no.7/8:406-412 Jl-Ag '61.

ORCZYKOWSKI, Andrzej, mgr ins. (Warsaw)

The PBU-63 series of prefabricated buildings. Inz i bud 21 no.5:153-158 My '64.

MROZOWSKA, Jadwiga; ORCZYKOWSKI, Albin

Presentation of the fetal hand before the rima pudendi. Gin.polska 31 no.6:678-681 N-D '60.

1. Z Instytutu Gruzliey Dyrektor: prof. dr med. W. Jaroszewicz Dyrektor: prof. dr med. W. Jaroszewicz Kierownik: prof. dr med. M. Bulska.

(LABOR PRESENTATION) (MONGOLISM case reports)

ORCZYNSKI, T., mgr., inz.

Reconstruction of the French quay in Gdynia Harbor. Tech gosp morska 11 no.7/8:218-222 '61. (EEAI 10:9/10)

1. Przedsiebiorstwo Budownictwa Inzynieryjno-Morskiego, Gdynia.

(Gdynia--Harbor)

ORCZYNSKI, T., mgr inz.

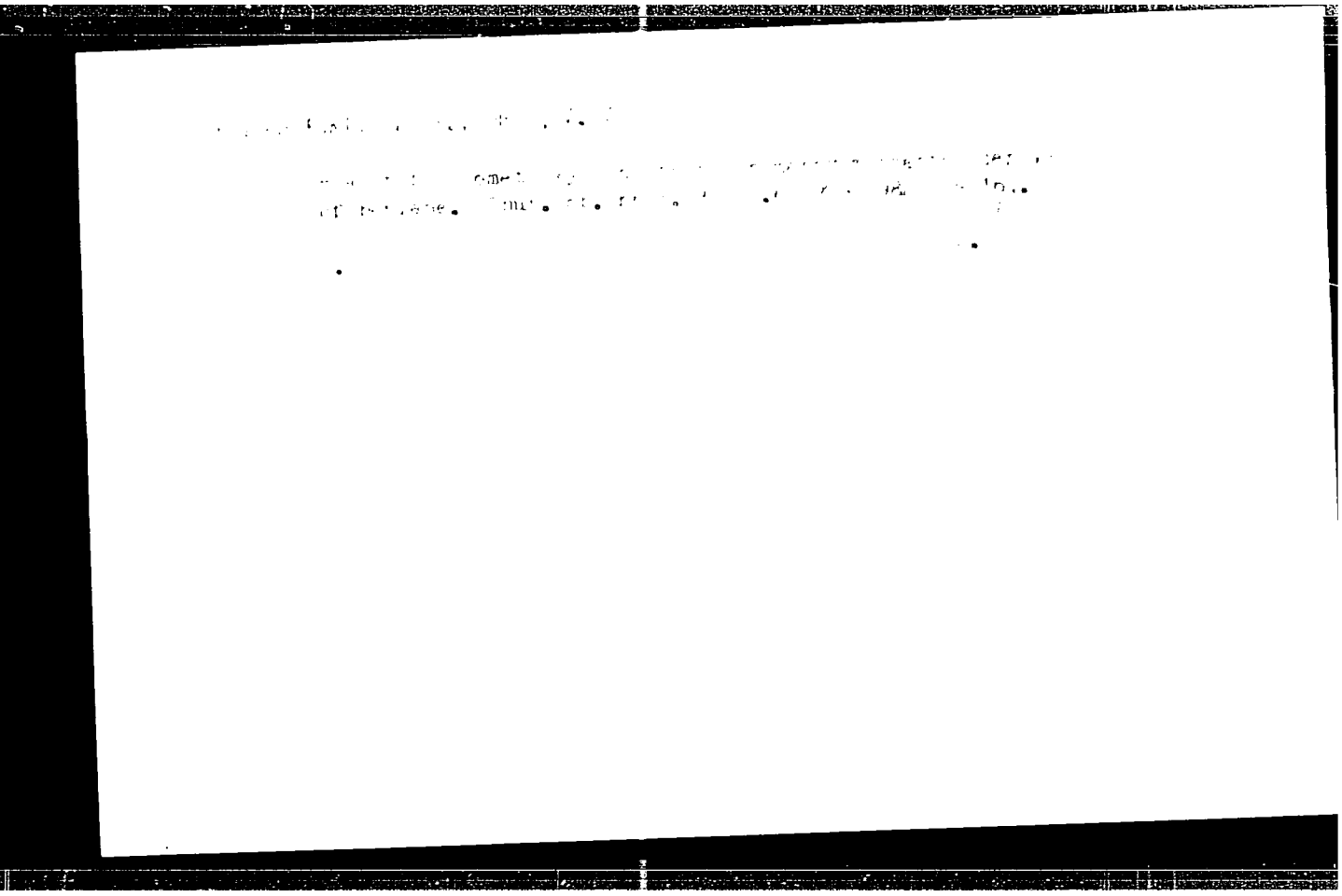
Reconstruction of the French Quay in the Gdynia seaport. Pt. 2. Tech gosp morska 13 no.1:19-21 Ja '63.

1. Przedsiebiorstwo Budownictwa Inzynieryjno-Morskiego, Gdansk.

KULAKOVA, I.N., zaveduyushchiy (Karaganda); ORDA, A.I., glavnyy vrach.

Electroreaction of erythrocyte sedimentation. Klin.med. 31 no.8:79-80 Ag '53. (MLRA 6:11)

1. Patogistologicheskaya laboratoriya Karagandinskogo oblastnogo onkologicheskogo dispansera. (Blood--Sedimentation)



ORDA, V.V.; YAGUPOL'SKIY, L.M.; BYSTROV, V.F.; STEPANYANTS, A.U.

Transmission of the induction effect of substituents SCF_3, $SOCF_3$, and SO_2CF_3 through a methylene group. Zhur. ob. khim. 35 no.9:1628-1636 S '65. (MIRA 18:10)

1. Institut organicheskoy khimii AN UkrSSR i Institut khimicheskoy fiziki AN SSSR.

ORDA, U. YA.

24(8) PHASE I BOOK EXPLOITATION SOV/2768

Vsesoyuznoye soveshchaniye po geotermicheskim issledovaniyam. 1st, 1956.

Problemy geotermii i prakticheskogo ispol'zovaniya tepla zemli; trudy, t.1. (Geothermal Problems and the Practical Utilization of Terrestrial Heat; Transactions of the 1st All-Union Conference on Geothermal Investigations, Vol. 1) Moscow, Izd-vo AN SSSR, 1959. 254 p. Errata slip inserted. 1,300 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk.

Ed. of Publishing House: L. V. Gessen; Tech. Ed.: I. N. Guseva; Editorial Board: V. I. Vlodavets (Chairman), I. D. Dergunov (Deceased), V. V. Ivanov, F. A. Makarenko, and N. I. Khitarov.

PURPOSE: This book is intended for geologists, hydrogeologists, and geophysicists in general and petroleum and coal geologists in particular.

COVERAGE: This volume, one of two published on the subject, is a collection of 22 articles based on reports presented at the First All-Union Conference on Geothermal Studies held in March, 1956. The Conference was sponsored and organized by the Laboratory of Vulcanology, the Laboratory of Hydrogeological Problems im. F. P. Savarinskiy, the Institute of Geochemistry and Analytical Chemistry, the Geophysical Institute, and was attended by representatives of more than 60 research organizations. The material presented in this volume may be divided into three general categories: (1) general geothermal problems of the Earth (2) current status and methods of geothermal research (3) regional geothermal problems. References accompany each article.

1/

YAGUPOL'SKIY, L.M.; [illegible]; [illegible], V.V.

Magnesium and lithium derivatives of trifluoromethylmethylsulfone and their reactions. Zhur. ob. khim. 34 no.10:3456-3462 O '64. (MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR i Institut khimii polimerov i monomerov AN UkrSSR.

ORDA, V.V.; YAGUP[illegible]SKIY, [illegible] ([illegible]'s'kyi, I.M.); BYSTR[illegible], [illegible];
STEPANYANTS, A.[illegible]

Transmission of the induction effect of [illegible]F_3 - [illegible] and
SO_2CF_3 substituents through the methylene group. [illegible]
[illegible]R [illegible]:34[illegible]-348 [illegible].

[illegible] Institut organicheskoy kh[illegible] [illegible]

L 20429-66 EWT(1)

ACC NR: AP6006963 SOURCE CODE: UR/0368/66/004/002/0134/0141

AUTHOR: Apanasevich, P. A.; Ordabayev, D. N.

ORG: none

TITLE: Resonance Raman scattering

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 2, 1966, 134-141

TOPIC TAGS: Raman effect, Raman scattering, laser, stimulated scattering, nonlinear optics

ABSTRACT: A quantum-mechanical theory of stimulated resonance Raman scattering by a three-level system which takes into account the effect of the incident and the scattered radiation on the state and the properties of the molecules is developed. The analysis, based on the use of a density matrix in the dipole approximation, is performed for the case when

$$\omega_1 - \omega_2 \approx \omega_{21} \qquad (1)$$

where ω_1 and ω_2 are the angular frequencies of the two incident waves comprising the electromagnetic field, and ω_{21} is one of the natural frequencies of the molecule and applies to all values of field intensities. A general solution of the problem could not be obtained. However, for the stationary case the system of linear differential

Card 1/2 UDC: 535.375.5

L 20429-66

ACC NR: AP6006963

equations with constant coefficients was reduced to a system of algebraic equations which is identical to those obtained by the probability method. The solutions obtained show that for the radiation the frequencies of which (ω_1 and ω_2) obey (1) the incident radiation causes not only the saturation effect, but also broadening and shifting of the Raman lines and a change in the probability of stimulated emission and absorption. The formulas derived for the amplification of the scattered beam are applied to two special cases. Conditions for amplification of scattered Raman radiation are established and the limits of application of the theory, which does not take into account the effect of radiation on the properties of the molecules, are considered. Orig. art. has: 31 formulas. [CS]

SUB CODE: 20/ SUBM DATE: 06May65/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 4222

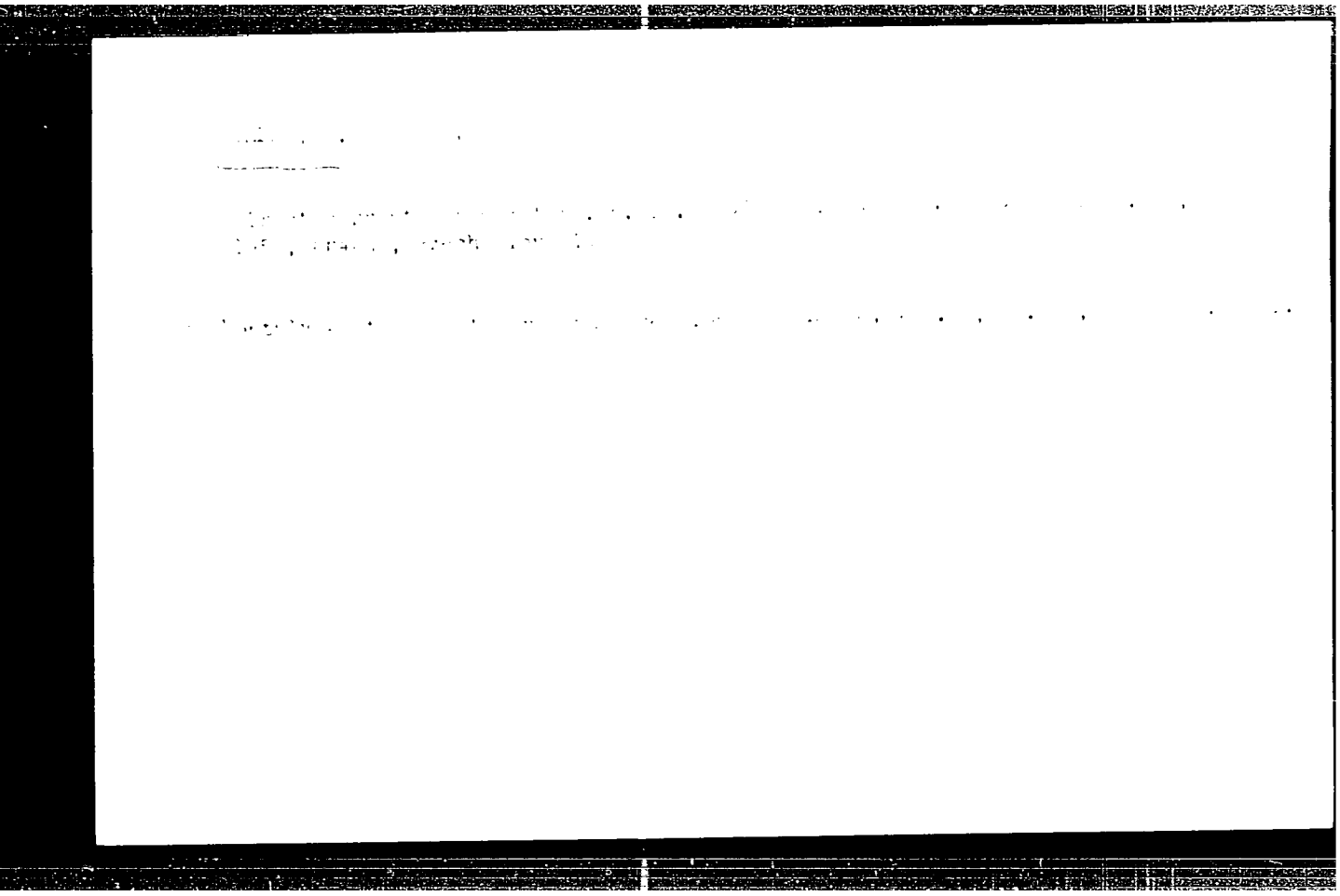
Card 2/2 ULR

Ordan, J.

Ordan, J. The construction and productin f a com shaped commutator. p. 302.

Vol. 7, no. 5, 1956
STROJNOELEKTROTECHNICKY CASOPIS
TECHNOLOGY
Czechoslovakia

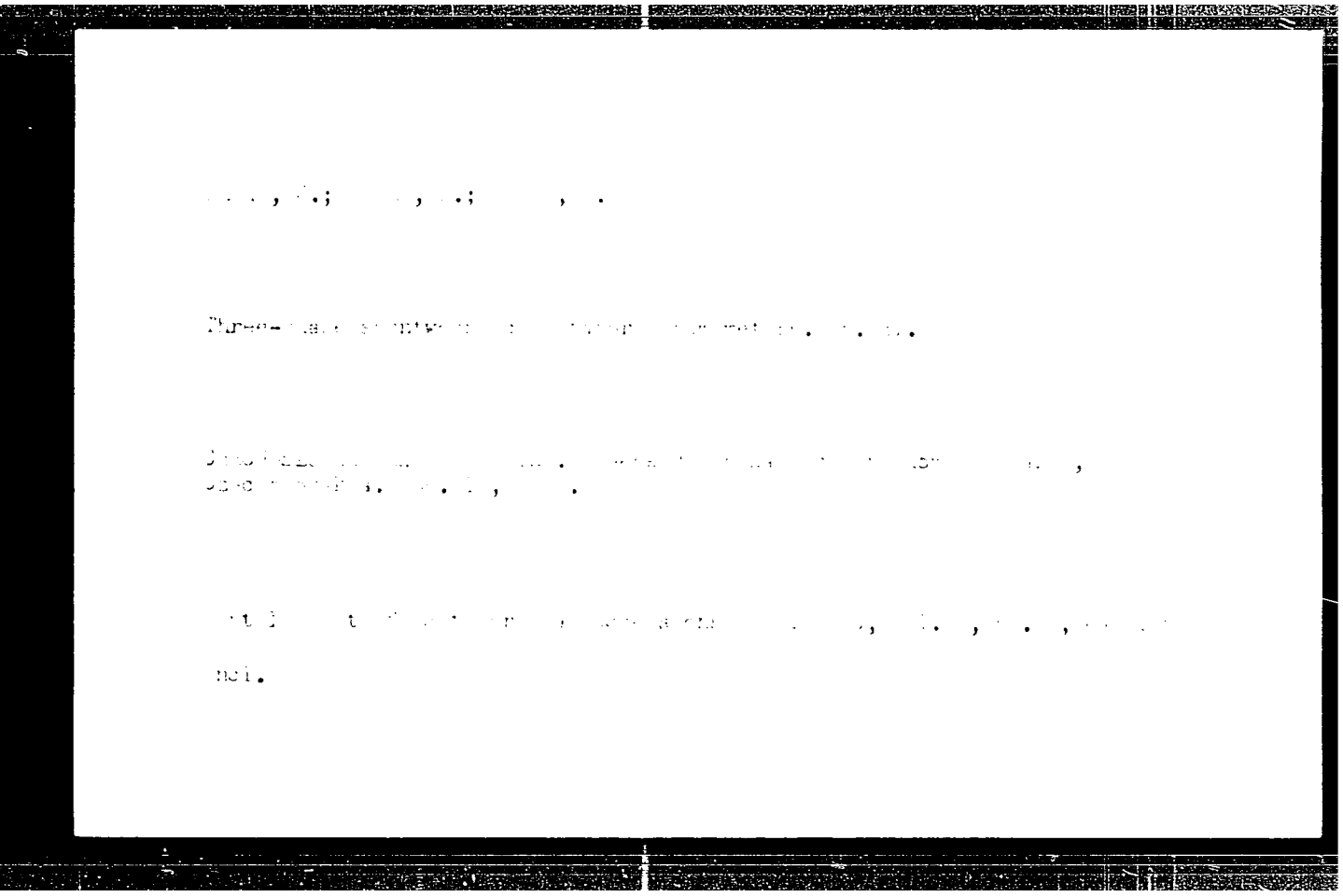
So: East European Accessions, Vol. 6, May 1957
No. 5

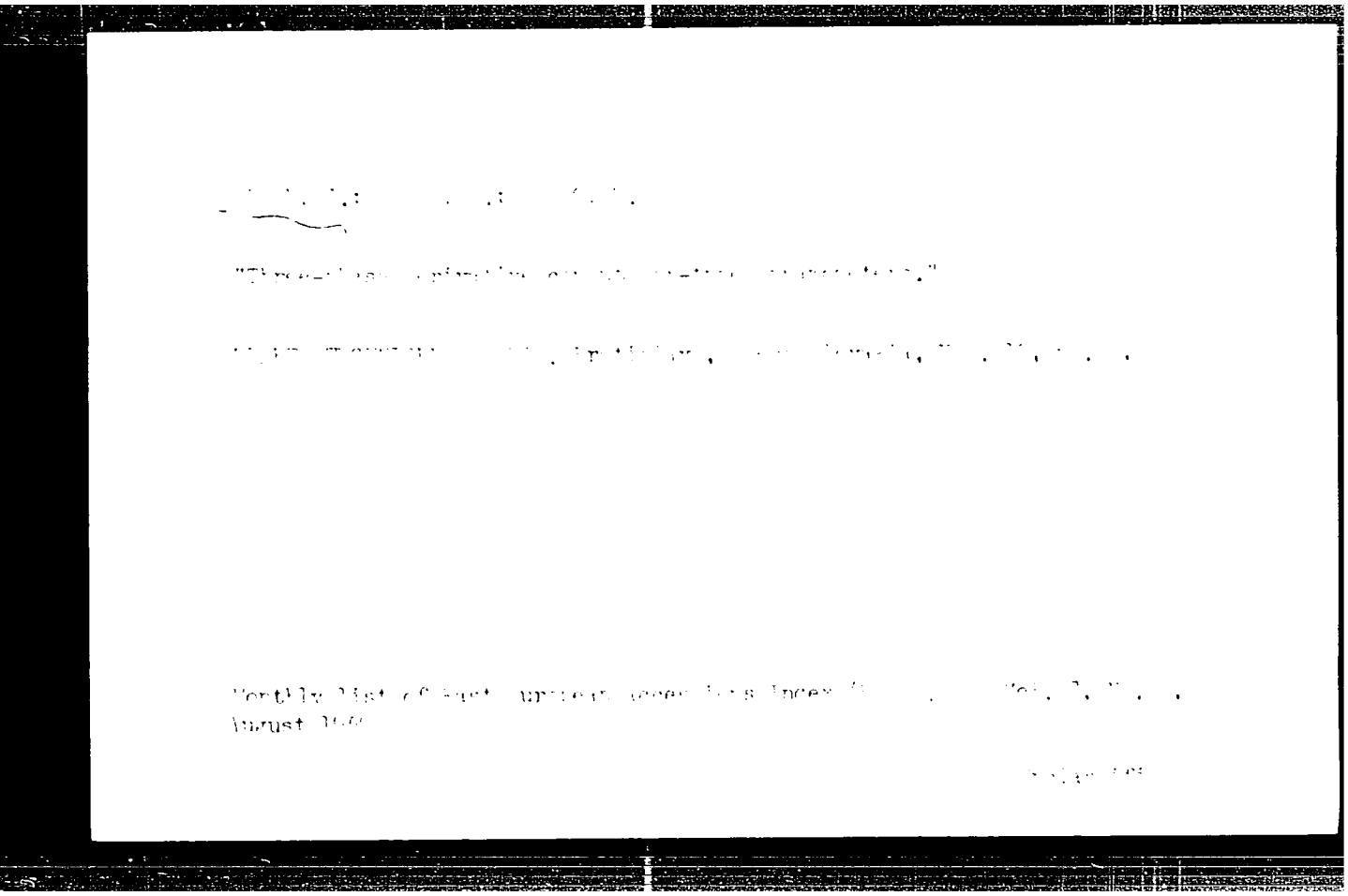


ONDAN, J.

Notes on the balancing of machinery. p. 25. (Strojnoelektrotechnicky [illegible]
Vol. 8, No. 2, 1958, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EE[illegible]C, Vol. [illegible], No. [illegible], Aug 1[illegible], Inc.





ORDAN, J., HUDEC, M.

New series of direct-current and commutator motors. p. 92.

ELEKTROTECHNICKY CASOPIS. Bratislava, Czechoslovakia, Vol. 10
No. 2, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol, 8, No. 10,
Oct. 1959.
Uncl.

[illegible], J.; [illegible], [illegible].

New trends in development of series of electric machines. p. [illegible].

[illegible] HEAVY [illegible]. (Illustrated magazine issued by the Ministry of Commerce of Czechoslovakia. English-language edition; issued also in German as Schwerindustrie der Tschechoslowakei and in French, Russian, and Spanish. Monthly).
Prague, Czechoslovakia, no. 11, 1[illegible].

Monthly list of East European Accessions, (LC), LC, Vol. 6, no. 12, Dec. 1[illegible]. Incl.

ROMANIA/Farm Animals. Swine. Q-2

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101213

Author : Gomoiu, Virgil; Ordance, Cornel

Inst : -

Title : The Complex of Methods Used for the Raising of Suckling Piglets.

Orig Pub: Rev. int. aliment. prod. anim. ale, 1957, No. 6, 25-27

Abstract: Measures used in the raising of piglets (supplementary concentrate feeding of suckling piglets, simultaneous farrowing, isolation of weak animals) resulted in a rise of viable piglets from 5.96 to 6.41 per sow, whereas losses of suckling piglets decreased from 19.65 percent to 14.98 percent. The average weight gains per head increased from 10.962 to 12.653 kg, and planned expenditures were reduced by 36.0 percent.

Card 1/1

L 17556-65 EWT(d)/EPF(n)-2/EWP(1) Po-4/Pq-4/Pg-4/Pae-2/Pu-4/Pk-4/Pl-4 SSD/
IJP(c)/ASD(a)-5/AFMDC/AEDC(a)/AFETR/AFTC(p)/RAEM(d)/RAEM(a)/ESD(dp) WW/BC

ACCESSION NR: AP5000149 S/0103/64/025/011/1566/1571

AUTHOR: Korotkevich, G. I. (Moscow); Ordanovich, A. Ye. (Moscow) B

TITLE: Iteration method of selecting control actions for bringing a plant into a specified state during a specified time

SOURCE: Avtomatika i telemekhanika, v. 25, no. 11, 1964, 1566-1571

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: An iteration algorithm for solving the problem formulated in the title is developed, for a wide class of nonlinear systems. Control actions are selected by expanding their expressions into known functions and by finding the expansion coefficients through minimization of a certain functional. The method permits varying the parameters one after another, which simplifies practical procedures and is the only possible technique for handling complex problems.

Card 1/2

L 17556-65

ACCESSION NR: AP5000149

2

The algorithm is illustrated by an example of rapidly bringing a gyro compass to the meridian; an electronic simulator with some auxiliary devices is used. The system is brought to the origin of coordinates by a step force q(t) by the time moment T; the force is switched at t = T/2; force steps b_1 and b_2 are sought. The process of finding a solution in the parameter space is shown; the system stability is explored; crudity of the system with respect to variations of the parameters of the iteration device is established. "In conclusion, the authors wish to thank Ya. N. Roytenberg for suggestion of the topic, and I. P. Chernov for his assistance in the work." Orig. art. has: 6 figures and 22 formulas.

ASSOCIATION: none

SUBMITTED: 20Jun63 ENCL: 00

SUB CODE: IE, DP NO REF SOV: 006 OTHER: 000

Card 2/2

SOV/124-58-10-11479

Translation from Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 111 (USSR)

AUTHOR Ordanovich, A.Ye.

TITLE An Electronic Analog of Joint Bending and Twisting Vibrations of a Nonhomogeneous Cantilever Beam (Elektronnaya model' sovmestnykh izgibno-krutil'nykh kolebaniy neodnorodnoy konsol'noy balki)

PERIODICAL V sb. Mezhvuz. konferentsiya po primeneniyu modelirovaniya v elektrotekhn. zadachakh i matem. modelirovaniya. Moscow, 1957, p 178

ABSTRACT: Bibliographic entry

Card 1/1

BUDKOVTSEV, B. B., ORDANOVICH, A. YE., SHMAL'GAUZEN, V. I.

"Some Methods For Experimental Determination of Statistical Characteristics of Random Signals."

report presented at the All-Union Conference on Statistical Radio Physics, Gor'kiy, 13-18 October 1958. (Izv. vyssh uchev zaved-Radiotekh., vol. , No. 1, pp 121-127) [illegible] card under SIFOROV, V. I.)

9(6), 10(6)

AUTHORS: Ordanovich, A.Ye., and Strelkov, S.P. SOV/155-58-2-39/47

TITLE: Electronic Model of the Torded Bending Vibrations of an Airplane Wing (Elektronnaya model' izgibno-krutil'nykh kolebaniy kryla samoleta)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 2, pp 181-188 (USSR)

ABSTRACT: At first a long straight wing is understood as a clamped beam. Then the latter is decomposed into eight cells arranged with respect to the length of the beam which are replaced by mechanic models. The coordinates of the eight shifts and the eight angles of twist are combined one with another by a system of differential equations. Then an electronic model is proposed which corresponds to this system of equations. The model consists of 32 integrators and 48 summators, the basic scheme contains 288 tubes. The experimental examination of the model yielded relatively good agreement of the obtained results with well-known data for the first and second harmonic of wing vibrations (error 2-3%). For the third harmonic the error amounted up to 14%.
There are 7 references, 3 of which are Soviet, 3 American, and 1 English.

Card 1/2

Electronic Model of the Torded Bending Vibrations of an Airplane Wing SOV/155-58-2-39/47

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

SUBMITTED: October 28, 1957

Card 2/2

ORDANOVICH, A. Ye.; Master Phys-Math Sci (diss) -- "The use of electron model-
ing for studying the natural oscillations of aircraft wings". Moscow, 1959.
9 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V.
Lomonosov, Phys Faculty), 100 copies (KL, No 17, 1959, 105)

IVANOV, V.N.; ORDANOVICH, A.Ye.; CHIGRAKOV, K.I.

Investigation of transducers for the measurement of low flow speeds under natural conditions. Nauch.dokl.vys.shkoly; elektromekh. i avtom. no.1:156-164 '59. (MIRA 12:11)

1. Rekomendovana kafedroy fiziki morya i vod sushi Moskovskogo gosuniversiteta.

(Anemometer)

31431
S/188/61/000/006/003/007
B108/B138

9.6000(1040,1139)

AUTHORS: Bukhovtsev, B. B., Ordanovich, A. Ye., Shenyavskiy, L. A., Shmal'gauzen, V. I.

TITLE: Measurement of the probability distribution of the instantaneous values of signals by means of amplitude discriminators

PERIODICAL: Moscow Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 6, 1961, 25 - 31

TEXT: The principle of operation and the designs of two-channel and multi-channel amplitude discriminators are presented. Determination of the probability distribution by an amplitude discriminator is based on measuring the time during which the signal in question does not exceed a given level. The discriminator trims the signal to the desired level and delivers a certain impulse for every section of the signal that lies under the set level. Subsequently, the impulses are time-averaged by a separate device. Fig. 3 shows a 16-channel amplitude discriminator with a threshold given by $U_{n+1/2} = \Delta U(n + 1/2)$ where

Card 1/[illegible]

BARANOV, A.V.; KANDIDOV, V.P.; ORDANOVICH, A.Ye.

Electronic modeling of transverse vibrations of rods in the presence of axial forces. Vest. Mosk. un. Ser. 3: Fiz., astron. 16 no.3:43-51 My-Je '61. (MIRA 14:7)

1. Kafedra obshchey fiziki dlya mekhmata Moskovskogo gosudarstvennogo universiteta.

(Elastic rods and wires--Vibration)
(Oscillations--Electromechanical analogies)

BUKHOVTSEV, B.B.; ORDANOVICH, A.Ye.; SHENYAVSKIY, L.A.; SHMAL'GAUZEN, V.I

Amplitude discriminator for measuring the probability distribution of instantaneous signal values. Vest. Mosk. un. Ser. 3: Fiz., astron. 16 no.6:25-31 N-D '61. (MIRA 14:12)

1. Kafedra obshchey fiziki dlya mekhaniko-matematicheskogo fakul'teta Moskovskogo universiteta.
(Parametric amplifiers)
(Automatic control)

S/264/63/000/003/001/004
A052/A126

AUTHORS: Baranov, A. V., Kandidov, V. P., Ordanovich, A. Ye.

TITLE: Investigation of elastic vibrations of an airplane on an electronic model

PERIODICAL: Referativnyy zhurnal, Vozdushnyy transport, no. 3, 1963, 9, abstract 3A48 (Dokl. 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v raslichn. otraslyakh tekhn. Sb. 3, M., 1962, 141 - 151)

TEXT: The simulation of natural elastic vibrations of an airplane with swept-back wings and wing-mounted engines is considered. An electronic model developed at the Department of Physics of MGU made it possible to solve the problem by reducing the airplane to a system with 33 degrees of freedom. 3 stages of calculation are considered: 1) Selecting a calculation scheme (elastic-mass model), 2) composing an equation for the selected model, 3) solving the equations derived on the electronic model. The block diagram of the electronic model and methods of in-

Investigation of elastic vibrations .....

S/264/63/000/003/001/004
A052/A126

vestigating vibrations are described. The studies carried out have shown the effectiveness of applying electronic models to the calculation of vibration of complex airplane designs.

O. Vershova

[Abstracter's note: Complete translation]

Card 2/2

S/271/63/000/002/028/030
A060/A126

AUTHORS: Baranov, A. V., Kandidov, V. P., Ordanovich, A. Ye.

TITLE: Use of electronic simulation in investigating transverse oscillations of a rod with axial loads

PERIODICAL: Referativnyy zhurnal, Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, no. 2, 1963, 68, abstract 2B361 (Dokl. 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otraslyakh tekhn. Sb. 3, Moscow, 1962, 153 - 161)

TEXT: It is pointed out that the study of transverse oscillations is required in the investigation of dynamic strength of such structures as towers, masts, helicopter blades, and turbine blades under the action of centrifugal forces, rockets moving under acceleration. Using an electronic simulator model, the transverse oscillations of a rocket moving under acceleration with a rigid accelerator in the tail were widely investigated. In the simulation of such problems the actual system in accordance with its oscillation properties is replaced by some discrete system with a finite number of degrees of freedom. The

Card 1/3

Use of electronic simulation in...

system of equations describing the motion of the discrete system is solved on the electronic simulator. The body of a contemporary rocket having considerable extension was replaced by a system of levers, springs and concentrated masses. The accelerator was considered as an absolutely rigid body with mass M_y and moment of inertia I_y. It was assumed that the force of the accelerator does not vary its direction under oscillation of the rocket and acts always strictly in the direction of flight. A separate cell $n + \frac{1}{2}$ of the discrete system is considered. Taking into account the actions of the neglected forces to the right and left of the cells and also the rise of moments as result of deformation of the springs, one constructs a system of equations of small oscillations for the $n + \frac{1}{2}$ -th element. By the use of geometrical relationships one simplifies the system of original equations. By combining in pairs the equations holding for all the $n = 1, \ldots, N$, where N is the number of cells, one writes the equation of motion of the mass m_n. At the rocket tail the boundary conditions will be the equations of motion of the rigid accelerator. From the equations obtained one sets up the structural diagram of the electronic simulator. The simulator consists of seven cells. It is indicated that electronic simulation of a rocket re-

Card 2/3

presenting an oscillating system "freely floating in space" is associated with certain difficulties. The absence of connections with fixed points makes it possible to displace itself and rotate without deformations. In the simulator motions arising from noise take the operational amplifiers outside their operational range and thus disturb their normal operation. To eliminate this, a special "fixing" was elaborated (at the mass center of the system). Equations are cited which have the form of a component of the acting force, for example, equations for elimination of progressive motion; it is indicated that in the simulator set-up the forces for the various motions were formed separately by means of ordinary summers. Operating experience with the simulator has shown that it is sufficient to specify the forces at a few points of the system. In the work use was made of a special-purpose simulator set-up. Its special feature is the raising of the working range up to audio-frequencies. As test problems the simulator was used to investigate the oscillations of a hinge-attached and cantilever-attached homogeneous rod with axial loads. There are 3 figures.

Z. G.

[Abstracter's note: Complete translation]

Card 3/3

KOROTKEVICH, V.I. (Moskva); OLEYNIK, A. Ye. (Moskva)

Iterative method for selection of control actions for the actuation of a system to a desired state in a given time. Avtom. i telem. 25 no.11:1547-1557 N '64. (MIRA 18:11)

DUNAYEV, M.N., inzh.; ORDANSKAYA, B.S., inzh.

Introducing hydro-cyclones in coal preparation plants. Obog.i brik. ugl. no.11:3-6 '59. (MIRA 13:6)
(Coal preparation) (Separators (Machines))

DUNAYEV, M.N., inzh.; MELIK-STEPANOVA, A.G., inzh.; ORDANSKAYA, B.S., inzh.

Using a hydrocyclone battery in the pulp-water system of coal preparation plants. Obog.i brik.ugl. no.14:21-35 '60.
(MIRA 14:5)

(Coal preparation) (Separators (Machines))

S/081/60/000/013(I)/014/014
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 13 (I), p. 449, # 53465

AUTHORS: Avgustinik, A. I., Gropyanov, V. M., Ordan'yan, S. S.

TITLE: Manufacture of Disks on Cermet Bonding for the Dressing of Abrasive Tools

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1959, No. 57, pp. 103-104

TEXT: Disks for the straightening of abrasive tools are made on brass bonding and have a series of deficiencies. The authors studied the effect of the composition of the ZrO_2 base cermet bonding on the strength and quality of WC disks. An X-ray analysis did not reveal any structural changes in WC grains after roasting. Zones with a higher content of metal from the cermet bonding formed around the WC grains; this promoted the strong fixing of these grains in the bonding. After roasting at 1,700°C, cracks were detected on the lateral surfaces of the disks and the hardness of grains on the surface was somewhat reduced. Apparently, the changes in the hardness of the grains were connected

Card 1/2

S/081/60/000/013(L)/014/014
A006/A001

Manufacture of Disks on Cermet Bonding for the Dressing of Abrasive Tools

with the diffusion of the bonding metal in WC. Better results were obtained by reducing the roasting temperature.

V. Autko

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

85893

9.2181 (2303, 3203)
24.7800 (1144, 1162)

S/048/60/024/011/009/036
B006/B060

AUTHORS: Moskalev, V. I. and Ordan'yan, S. S.

TITLE: Study of the Effect of Small Chromium- and Bismuth Oxide Additions Upon the Dielectric and Piezoelectric Properties of Polycrystalline Barium Titanate

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya. 1960. Vol. 24, No. 11, pp. 1412-1415

TEXT: This is the reproduction of a lecture delivered at the Third Conference on Ferroelectricity which took place in Moscow from January 25 to 30 1960. With a view to finding novel piezoelectric materials with parameters stable also at higher temperatures, the authors studied the effect of smaller chromium- and bismuth oxide additions to $BaTiO_3$.

Commercially pure substances were used for preparing the specimens; bismuth- and chromium oxide were chemically and analytically pure, respectively. The mixtures were preheated at 1220 - 1340°C (2 hours) and

Card 1/4

85893

Study of the Effect of Small Chromium- and Bismuth Oxide Additions Upon the Dielectric and Piezoelectric Properties of Polycrystalline Barium Titanate

S/048/60/024/[illegible]
B006/B060

the final heating temperature range was 1280-1340°C (2-3 hours). All specimens had practically zero porosity at the beginning; they were "hot" polarized in the air, at temperatures near the Curie point. The electric fields applied ranged, depending on the composition of the specimen between 8 and 15 kv/cm (15-60 min). ε and tan δ were measured on a Tesla bridge at 1 kc/sec and $E_{\sim}$ = 40 v/cm, the piezoelectric moduli being determined by the resonance - antiresonance method. All measurements were made under air cooling. Some of the measurement results are tabulated; the data obtained are in agreement with thos applied by other authors. A study of the solid solutions of the $BaTiO_3$ - $Bi_2O_3 \cdot 3TiO_2$ systems (designated as A - B in the following) and $BaTiO_3$ - Bi_2O_3 $3TiO_2$ - $Cr_2O_3 \cdot 3TiO_2$ (A-B-C) showed that the introduction of bismuth ions or bismuth ions + chromium ions in $BaTiO_3$ considerably reduces the temperature stability of the $BaTiO_3$ parameters. In the compounds I: 95% A - 5% B; II: 96.4% A - 0.6% C - 3% B, and III: 94.4% A - 0.6% C - 5% B (all values in % by weight)

Card 2/4

S/048/60/024/011/029/036
B006/B060

Study of the Effect of Small Chromium- and Bismuth Oxide Additions Upon the Dielectric and Piezoelectric Properties of Polycrystalline Barium Titanate

the second phase transition was not to be found in the $\varepsilon(t)$ curve as far down as -80°C; varied only inconsiderably in the range -80 - +50°C ($\varepsilon \sim 900$); $\tan\delta = f(t)$ in weak fields remains practically constant in the range -80 - +100°C ($\tan\delta \sim 3\%$). In Figs. 1,2 the temperature dependence of piezoelectric parameters is illustrated for compounds I, II, III, $BaTiO_3$ and $94\%BaTiO_3 - 6\%CaTiO_3$. The additions were all found to have a flattening effect upon the curves, the least to do so being the calcium titanate addition. The other additions not only have a flattening effect but also cause the curves to run nearly parallel to the temperature axis. Fig. 3 shows $\tan\delta = f(E)$; here as well, the additions have a flattening effect, the most favorable being found to be I (the losses increase slowly and linearly with E). The best effects were found to be given by additions on f_{res}, ε and $(d_{31} \cdot E_{Young})^2$. The latter parameter (which characterizes the specific acoustic power) is for II and III two to three times as large as

Card 3/4

Study of the Effect of Small Chromium- and Bismuth Oxide Additions Upon the Dielectric and Piezoelectric Properties of Polycrystalline Barium Titanate

S/048/60/024/011/029/036
B006/B060

for ceramics with 6%$CaTiO_3$, despite a reduction of the piezoelectric modulus. There are 3 figures, 1 table, and 2 references: 1 Soviet and 1 US.

Состав, вес. % 1	T_K, °C 2	ε в T_K 3	ε при 20 °C 4	Температура второго фазового перехода, °C 5	$d_{31} \cdot 10^6$ при 20 °C, ед. CGSE 6
$BaTiO_3$	120	8000	1550	15	1,9
99,4% $BaTiO_3$—0,6% $Cr_2O_3 \cdot 3TiO_2$	120	8000	1100	10	1,3
98,3% $BaTiO_3$—1,7% $Cr_2O_3 \cdot 3TiO_2$	125	6000	800	0	0,9
96,5% $BaTiO_3$—3,5% $Cr_2O_3 \cdot 3TiO_2$	125	2200	450	—30	—

Legend to the Table:

1) Composition, % by weight
2) Curie temperature °C
3) ε at the Curie point
4) ε at 20°C
5) Temperature of the second phase transition, °C
6) $d_{31} \cdot 10^6$ at 20°C, CGSE

Card 1/4

ORDAN'YAN, S. S.
TITLE: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963).
SOURCE: Atomnaya energiya, v. 15, no. 3, 1963, 266-267.

ACCESSION NR: AP3008085

S. S. Ordan'yan, A. I. Avgustinnik, V. S. Vidergauz. The ZrC-Mo phase diagram at temperatures above 2500C.

L. B. Dubrovskaya, G. P. Shveykin. Phase diagram of the Ta-C system at temperatures above 2500C.

Yu. N. Vil'k, R. G. Avarbe, and others. The NbC-W interaction at temperatures above 2500C.

L. M. Katanov. Investigation of the Cr_2C_3-Fe, Cr_7C-Fe, and Cr_2C-Ti systems at temperatures below 2500C.

Yu. B. Kuz'ma, Ye. I. Glady*shevskiy, and Ye. Ye. Cherkashin. Physicochemical investigation of the Nb-Co-Si system.

N. N. Kolomy*tsev, N. V. Moskaleva. Phase composition of Mo-Ni-B alloys.

Ye. I. Glady*shevskiy and others. Interaction between group 4a and

Card 6/11

L 31876-66 EWT(m)/ETC(f)/EWP(o)/EWP(w)/T/EWP(t)/ETI IJP(c) AT/WH/GD/WW/JD/JG
ACC NR: AT6013559 (A) SOURCE CODE: UR/0000/65/000/000/0211/0218

AUTHOR: Vil'k, Yu. N.; Ordan'yan, S. S.; Avarbe, R. G.; Avgustinnik, A. I.; Ryzhkova, T. P.; Omel'chenko, Yu. A.

47
46
B+1

ORG: State "Order of the Red Banner of Labor" Institute of Applied Chemistry (Gosudarstvennyy ordena Trudogo Krasnogo Znameni institut prokladnoy khimii)

TITLE: Phase diagram of the Zr-ZrC system

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorganicheskiye soyedineniya (High temperature inorganic compounds). Kiev, Naukova, dumka, 1965, 211-218

TOPIC TAGS: zirconium, carbide, nonferrous metal, phase diagram, phase composition

ABSTRACT: The phase diagram of the Zr-ZrC system was drawn up on the basis of experimentally determined melting points, x-ray, and microhardness data for samples containing 1.25-46.25 atm % C. The work was conducted in order to resolve a controversy in the literature. The phase diagram was examined in the 600°-3100°C range. The samples were prepared by fusing zinc hydride with carbon in various ratios and holding for 4 hrs at 1400°C in argon atmosphere. The phase diagram of the Zr-ZrC system is shown in figure 1. The eutectic temperature of the system is 1820°C. The eutectic alloy contains 3.0 atm % C. The changes of the ZrC-phase lattice parameter as a function of

Card 1/2

Card 2/2

L 18943-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPR/EWP(t)/EPA(bb)-2/EWP(b) Ps-4/
Pt-10/Pu-4 IJP(c) --AT/WH/JD/JG
ACCESSION NR: AP5000505 S/0080/64/037/011/2375/2382

AUTHOR: Neshpor, V. S.; Ordan'yan, S. S.; Avgustinuk, A. I.; Khusidman, M. B.

TITLE: The effect of the chemical composition of zirconium and niobium carbides in a homogeneous region on their electrical and thermal properties

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 11, 1964, 2375-2382

TOPIC TAGS: refractory carbide, zirconium carbide, niobium carbide, nonstoichiometric carbide, transition metal carbide, carbide electrical property, carbide thermal property

ABSTRACT: Electrical resistivity, absolute thermoelectric power, and thermal conductivity at room temperature have been measured in homogeneous, nonstoichiometric zirconium and niobium carbides, ZrC and NbC, with x varying from 0.6—0.7 to 1. Zirconium and niobium carbides were selected for study as representative of the refractory carbides of the group-IV and group-V transition metals, which are used in certain parts (e.g., cathodes) of thermionic converters. The single-phase

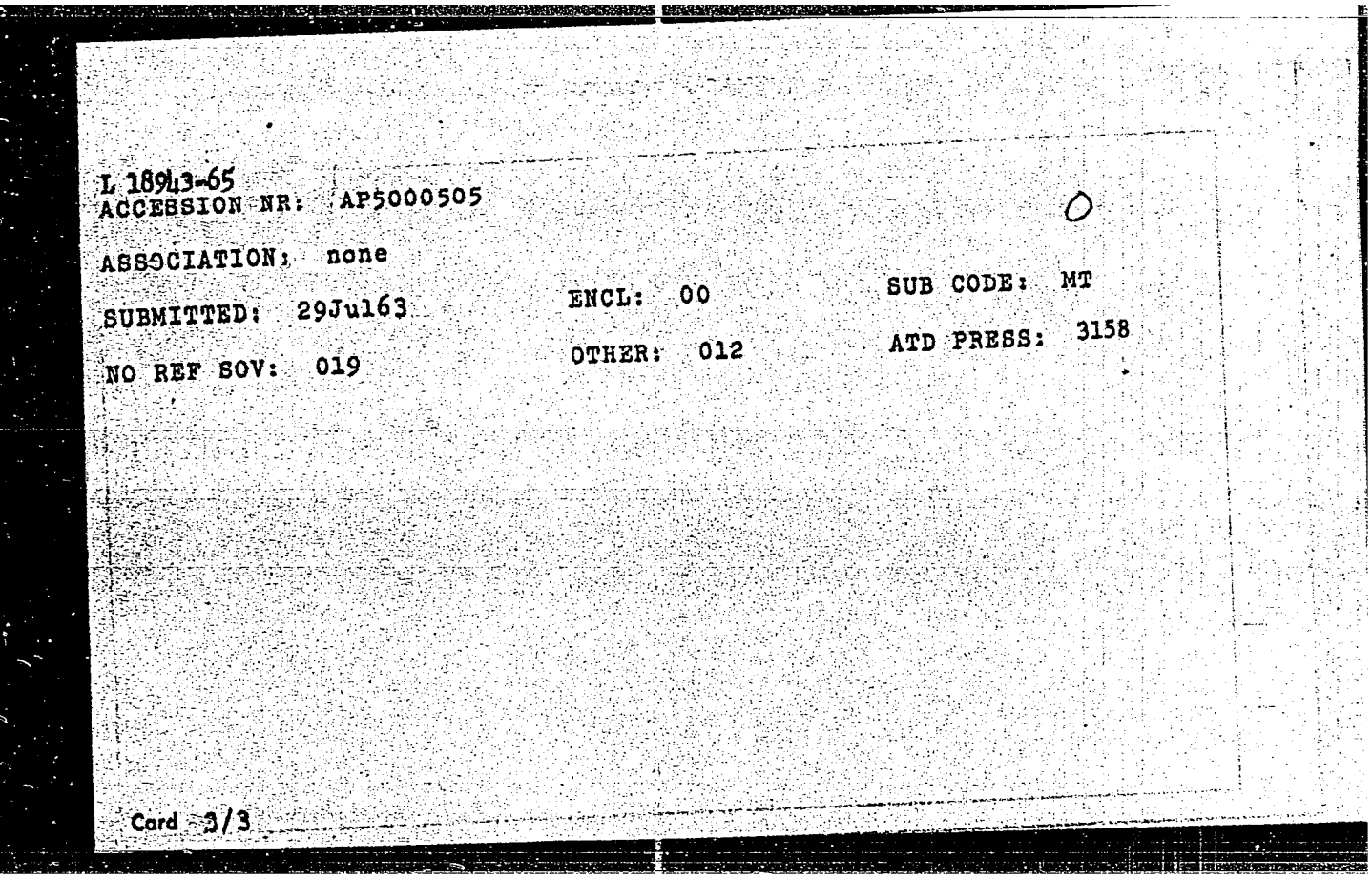
Card 1/3

L 18943-65

ACCESSION NR: AP5000505

carbide samples were prepared by compacting and vacuum sintering the powdered mixtures of nearly stoichiometric carbides and corresponding metals. Resistivity was measured by a compensating circuit method; thermal conductivity, by the method of steady heat flow. Thermal emf generated in the sample between two parallel plane semiconductor plates served as a measure of the heat flow. The same equipment was used for measuring thermal conductivity as for measuring the thermoelectric power. Experimental data were tabulated and plotted versus carbon deficit in MeC_x. The data indicated a substantial difference between the $Me^{IV}C_x$ and $Me^{V}C_x$ carbides in the properties which depend on the electronic configuration of the molecule, i.e., the overall resistivity and thermal emf. The difference in the properties is explained in terms of different effective valence of the metals. Similarity between $Me^{IV}C_x$ and $Me^{V}C_x$ carbides was shown in those properties which depend on lattice dynamics, i.e., 1) resistivity component due to the scattering on vacancies in carbon sublattice, which is evidenced in the pattern of composition-dependence of the molecular rigidity, 2) lattice thermal conductivity, and 3) coefficient of thermal expansion. Orig. art. has: 6 figures, 2 tables, and 12 formulas.

Card 2/3



L 18943-65
ACCESSION NR: AP5000505 O

ASSOCIATION: none

SUBMITTED: 29Jul63 ENCL: 00 SUB CODE: MT

NO REF SOV: 019 OTHER: 012 ATD PRESS: 3158

Card 3/3

L 52361-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5009363 UR/0363/65/001/002/0173/0180

AUTHOR: Neshpor, V. S.; Ordan'yan, S. S.

TITLE: Effect of chemical composition on the structure, electrical properties and thermal properties of vanadium monocarbide in the homogeneity region

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 2, 1965, 173-180

TOPIC TAGS: vanadium carbide, electric property, thermal property

ABSTRACT: The purpose of this work was to investigate the behavior of vanadium carbide in the homogeneity region. Density, electrical conductivity, thermal conductivity, thermal-emf and phase composition of vanadium carbide were measured, the content of oxygen ranging from 46.5 to 36.8 at %. The alloys studied contain only one monocarbide phase with NaCl type cubic lattice, the unit cell dimensions ranging from 4.170 Å, for monocarbide containing 18.23 wt % C to 4.129 Å, for monocarbides with 14.76 wt % C. Vanadium monocarbides have vacancies both in the carbon sublattice and in the vanadium sublattice. The concentration of the latter disappears rapidly when the carbon content is reduced. The electrical conductivity

Card 1/3 submitted: 15 Oct 64

L 52361-65

ACCESSION NR: AP5009363

4

and thermal conductivity of vanadium monocarbides with respect to concentration conform to the same law as the previously investigated carbides of Ti, Zr, Nb and Ta. However, carbon rich vanadium carbides show extreme values in these properties as distinct from the other transition metal carbides due to the scattering of electrons and thermal lattice oscillations at vacancies in the vanadium sublattice. In contrast to the other IV and V group transition metal monocarbides (Ti, Zr, Hf, Nb and Ta) the absolute differential thermal-emf of vanadium monocarbides has a positive sign. This is because of scattering of conductivity electrons on vacancies in carbon and vanadium sublattices. "The effect of temperature on the thermal-emf of vanadium monocarbides was investigated in cooperation with S. V. Ayrapetyanets. The density measurements were carried out by T. A. Nikol'skaya." Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Applied Chemistry Institute); Tekhnologicheskiy institut im. Lensoveta, Leningrad (Technological Institute)

Card 2/3

L 52311-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EWG(m)/EPR/EPA(w)-2/T/EWP(t)/EWP(b) Pab-10/Pr-4/Ps-4/Pt-7/Pu-4 IJP(c) JD/WW/JG/WH
ACCESSION NR: AP5008814 S/0080/65/038/003/0665/0667

AUTHOR: Avgustinik, A. I.; Vigdergauz, V. S.; Kalinina, N. G.; Ordan'yan, S. S.

TITLE: Interaction between boron nitride and chromium 27 27 27

65
B

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 3, 1965, 665-667

TOPIC TAGS: boron nitride, chromium, metallic regulus, chromium boride, cermet, chromium cermet

ABSTRACT: Products of interaction of boron nitride with chromium were examined by emission- and X-ray spectroscopy. Samples of chromium containing cermets 12 coated with boron nitride were heated in an argon atmosphere at a rate of 500°C per hour up to 1,650°C, and held at 1,650°C for 5 minutes. After this treatment the metallic reguli 0.8 to 2 mm in diameter were detected on the cermet surface. Two phases are present: an anisotropic phase with a microhardness of 2,443 kg/cm^2 and an isotropic phase with a microhardness of 284 kg/cm^2. Independently prepared samples of chromium boride according to reaction $2BN + 4Cr \rightarrow 2Cr_2B + N_2\uparrow$ have a microhardness of 2,425 kg/cm^2. The weight per cent ratio of boron to chromium in the

Card 1/2

L 52311-65

ACCESSION NR: AP5008814

anisotropic phase is 10 which agrees with the composition of Cr_2B (ratio 10.4). In the isotropic phase no boron is present according to emission spectroscopic analysis. At 1,650°C chromium decomposes boron nitride with resultant formation of chromium boride. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 28Feb6? ENCL: 00 SUB CODE: MM, IC

NO REF SOV: 004 OTHER: 001

LL

Card 2/2

L 63049-65 EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c) Pu-4 IJP(c) JD/WW
ACCESSION NR: AP5017778 UR/0080/65/038/007/1500/1506
546.831+546.831'261+669.018.1

30
B

AUTHOR: Vil'k, Yu. N.; Ordan'yan, S. S.; Avarbe, R. G.; Avgustinik, A. I.; Ryzhkova, T. P.; Omel'chenko, Yu. A.

TITLE: Phase diagram in the Zr-ZrC system

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 7, 1965, 1500-1506

TOPIC TAGS: zirconium, zirconium carbide, phase diagram, alloy hardness

ABSTRACT: A phase diagram (see Fig. 1 of the Enclosure) plotted on the basis of measurements of melting points and data of x-ray structural and metallographic studies in the Zr-ZrC system (in the range of 1.25 to 46.25 at. % C) was found to be eutectic in character. The temperature of the eutectic is 1820C, and the eutectic composition contains 3.0 at. % carbon. The solubility of the latter is about 2 at. % at the temperature of the eutectic transformation. The region of homogeneity of the ZrC phase at the temperature of the eutectic and at 1250C is bounded by 35 and 39 at. % C, respectively. The lattice constant of alloys located in the two-phase region after soaking at 1400C is equal to 4.653 kX; the

Card 1/3

L 63049-65

ACCESSION NR: AP5017778

extrapolated value of the lattice constant at the upper boundary of the region of homogeneity is equal to 4.688. The microhardness of alloys in the region of homogeneity of the ZrC phase and in the two-phase region is given. In accordance with a hypothesis advanced earlier, the microhardness of alloys may be extrapolated in a straight line to the value of microhardness for pure zirconium at zero carbon content. The solidus line extrapolated to the melting point of zirconium carbide reaches a point between 3375 and 3500C, which also agrees with the data on the melting point of ZrC. Orig. art. has: 5 figures.

ASSOCIATION: None

SUBMITTED: 23Sep63 ENCL: 01 SUB CODE: IC, MM

NO REF SOV: 006 OTHER: 008

Card 2/3

L 63049-65
ACCESSION NR: AP5017778 ENCLOSURE: 01

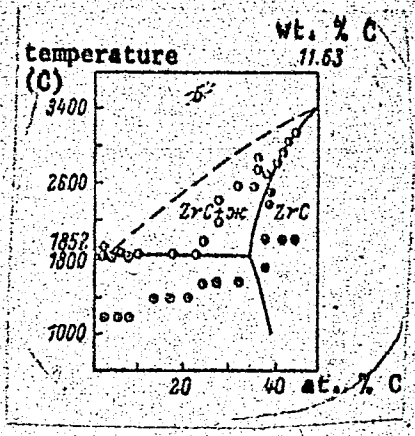


Figure 1. Phase diagram of the Zr - C system.

Card 3/3

L 52622-65 EWT(l)/EPA(s)-2/EWT(m)/EPF(n)-2/EWG(v)/EPR/EWP(t)/EWP(b)/EWA(l)
Pe-5/Ps-4/Pt-7/Pu-4 LJP(c) JD/WW/JG

ACCESSION NR: AP5014076 UR/0363/65/001/004/0480/0482

AUTHOR: Neshpor, V. S.; Ordan'yan, S. S. 49 48 B

TITLE: Some electric and thermal properties of tantalum monocarbide in the region of homogeneity 27 27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 480-482

TOPIC TAGS: tantalum carbide, thermoelectromotive force, thermal conductivity 21

ABSTRACT: The authors measured the electrical resistivity ρ of tantalum carbides containing various amounts of carbon (4.365, 4.77, 4.97, 5.50, 6.11 wt. %) and determined for the first time the absolute differential thermo-emf (s) and thermal conductivity (λ) of these carbides in the region of their homogeneity. The measurements of ρ are in good agreement with the earlier data of G. V. Samsonov and V. B. Rukina (*Dokl. AN URSR*, 3, 247, 1857). The absolute differential thermo-emf of tantalum carbides has a negative sign and decreases with rising carbon content, displaying a slight maximum in the carbon-rich region of compositions. The total thermal conductivity of the carbides declines markedly with decreasing carbon content because of the scattering of the conduction electrons by vacant carbon sites

Card 1/2

L 52622-65

ACCESSION NR: AP5014076

and by thermal lattice vibrations, whereas the lattice component of the thermal conductivity is virtually independent of the carbon content. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: 07Jan65 ENCL: 00 SUB CODE: IC

NO REF SOV: 007 OTHER: 004

Card 2/2

L 15736-66 EWT(1)

ACC NR: AP6000898 SOURCE CODE: UR/0181/65/007/012/3698/3700

AUTHORS: Golikova, O. A.; Avgustinnik, A. I.; Klimashin, G. M.; Kozlovskiy, L. V.; Ordan'yan, S. S.; Snetkova, V. A.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Electric properties of carbides of the transition metals of group IV

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3698-3700

TOPIC TAGS: titanium compound, zirconium carbide, hafnium compound, carbide, thermal emf, Hall constant, resistivity, transition element

ABSTRACT: The purpose of the investigation was to compare the electric properties (thermal emf, resistivity, Hall constant) of TiC, ZrC, HfC as functions of the composition in the temperature interval 300 -- 1500K. The data on TiC were taken from an earlier investigation by the authors (FTT v. 7, 2860, 1965). The ZrC and HfC were prepared by the same technology as the TiC. The plots of all the measured

Card 1/2

L 15736-66

ACC NR: AP6000898

quantities against the carbon concentration are approximately the same for all three carbides. This demonstrates that the scattering mechanism and energy spectrum of the carriers are the same in all the compounds. An unexpected result is the fact that the effective masses of the three carbides are equal, since their lattices have different lattice constants and the participating electrons come from different shells. From the fact that the ratio of the distances between the metal and carbide atoms (R) and the radii of the metallic atoms (r) is also constant for all carbides, it is concluded that the orbitals of the metal atoms overlap equally. This explains the equality of the effective masses. The carrier scattering mechanism is briefly discussed. Orig. art. has: 2 figures, 1 formula, and 1 table.

SUB CODE: 07 / SUBM DATE: 23Jul65/ ORIG REF: 004/ OTH REF: 003/

Card 2/2

L 21440-66 EWP(e)/EWT(m)/EPF(n)-2/EWA(d)/T/EWP(t)/EWP(k) IJP(c) JD/WW/JG

ACC NR: AP6008267 SOURCE CODE: UR/0080/66/039/002/0318/0323

AUTHOR: Avgustinik, A. I.; Ordan'yan, S. S.

ORG: none

TITLE: Structure of the alloys of Zr-C-Ta system

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 318-323

TOPIC TAGS: zirconium carbon tantalum system, zirconium alloy, carbon containing alloy, tantalum containing alloy

ABSTRACT: The interaction between zirconium carbides and tantalum over a wide range of temperatures and concentrations has been investigated. Specimens of 13 alloys 10 mm in diameter and 10 mm thick were obtained by compacting a mixture of powdered zirconium carbide, 99.5%-pure tantalum, calcium-reduced zirconium, and acetylene soot under a pressure of 4 t/cm^2 and vacuum sintering at 2273K for 1—2 hr. Sintered specimens were ground to a particle size of less than 60 μ, and compacted and sintered 3—6 times. It was found that with increasing tantalum content in solid solution, the solidus temperature decreases, and in the region of two-phase alloys, drops to 2750K, at which temperature a maximum solubility of tantalum of about 35 at% is reached. On the basis of x-ray diffraction, metallographic, and

Card 1/2 UDC: 546.3—19'831'26'883

L 21440-66
ACC NR: AP6008267

chemical analyses the solidus temperatures for all the alloys tested were determined and the section of the Zr-C-Ta system at 2273K and the section of the ZrC-Ta system were plotted. No ternary compounds were found. The Zr-C-Ta system may be useful for designing heat-resistant alloys: either single-phase alloys on a base of cubic carbide, or two-phase cermets with metallic tantalum as a binding material. Orig. art. art. has: 4 figures and 2 tables. [AZ]

SUB CODE: 11, 13/ SUBM DATE: 17Mar65/ ORIG REF: 009/ OTH REF: 011
ATD PRESS: 4221

Card 2/2 UDC

L 24353-66 EWP(e)/EWT(m)/ETC(f)/EWG(m) JD/JG/AT/WH

ACC NR: AP6007253 (A) SOURCE CODE: UR/0363/66/002/002/0299/0302

AUTHOR: Ordan'yan, S.S.; Kraskovskaya, A.A.; Avgustinik, A.I.

41
B

ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheskiy institut)

TITLE: Phase diagram of the HfC-Mo system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 2, 1966, 299-302

TOPIC TAGS: hafnium compound, carbide, molybdenum, phase diagram

ABSTRACT: The article gives the results of a study of the reaction of hafnium carbide and molybdenum over a wide range of compositions and temperatures. The alloys were prepared from hafnium carbide powder containing 6.2% bound carbon, 0.2% free carbon, and 0.1% nitrogen, and molybdenum powder of more than 99.5% purity. The chemical compositions of the 14 alloys investigated are given in a table; the weight % molybdenum varied from 1 to 95%. Heat treatment of objects made of these alloys was done at a temperature of more than 2000°C. X-ray, metallographic, and chemical analyses were made of alloys lying between hafnium carbide and molybdenum in the hafnium-carbon-molybdenum system. On the basis of the experimental data and of determinations of the

Card 1/2 UDC: 541.123.2

L 24353-66

ACC NR: AP6007253

melting temperature, a phase diagram is constructed for the quasi-binary eutectic type system hafnium carbide-molybdenum, with a eutectic composition of approximately $Hf_{0.143}Mo_{0.857}C_{0.143}$ (alloy with 75 weight % molybdenum) at 2310°C. Orig. art. has: 3 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 05Jul65/ ORIG REF: 007/ OTH REF: 011

Card 2/2 pb

L 29776-66 EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6015069 (A) SOURCE CODE: UR/0363/66/002/005/0855/0863

AUTHOR: Neshpor, V. A.; Ayrapetyants, S. V.; Ordan'yan, S. S.; Avgustinik, A. I.

ORG: State Institute of Applied Chemistry (Gosudarstvennyy institut prikladnoy khimii); Institute of Semiconductors, AN SSSR (Institut poluprovodnikov AN SSSR); Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheskiy institut)

TITLE: Effect of the chemical composition of group IV and V transition metal monocarbides in the region of homogeneity on the temperature dependence of their resistivity and thermal emf

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 855-863

TOPIC TAGS: carbide, zirconium carbide, vanadium compound, niobium compound, tantalum compound, thermal emf, resistivity, transition element, temperature dependence, chemical composition, electron structure

ABSTRACT: Continuing their study of the electronic structure of group IV and V transition metal monocarbides, the authors investigated the temperature dependence of the electrical resistivity and absolute differential thermal emf of zirconium,

Card 1/2

UDC: 546.261:669.018.5

L 29776-66

ACC NR: AP6015069

vanadium, niobium and tantalum monocarbides which were prepared by sintering. Conduction in these monocarbides was found to be metallic in character and due to free electrons. As the carbon content (i.e., the number of carbon vacancies) of the monocarbides changes, there is a change both in residual resistivity and in the slope of the temperature dependence of the resistivity and thermal emf; there is a drop in carbon content in the region of homogeneity of the monocarbides. This can be interpreted by assuming a decrease in the density of states and in the rate at which the area of the Fermi surface changes with the energy on passing from carbon-rich monocarbides with the prevalence of directed M-C bonds to carbon-poor monocarbides with the prevalence of directed M-M bonds. Orig. art. has: 8 figures and 2 formulas.

SUB CODE: 11,07,20/ SUBM DATE: 22Mar65/ ORIG REF: 017/ OTH REF: 013

Card 2/2

L 06294-67 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) AT/WH/JD/WW/JG/GD
ACC NR: AT6027150 (A) SOURCE CODE: UR/0000/65/000/000/0220/0228

AUTHOR: Ordan'yan, S. S.; Avgustinik, A. I.; Vigdergauz, V. S.

ORG: none

TITLE: Phase diagram of ZrC-Mo

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii silikatov i okislov (Studies in the field of chemistry of silicates and oxides). Moscow, Izd-vo Nauka, 1965, 220-228

TOPIC TAGS: zirconium carbide, molybdenum, alloy phase diagram

ABSTRACT: On the basis of x-ray diffraction, metallographic and chemical analyses and measurements of temperatures of the start of fusion in the Zr-C-Mo system, a phase diagram of the quasi-binary section ZrC-Mo was plotted (see Fig. 1). It was found that the solubility of Mo increases with rising temperature; it amounts to 1.2, 3.1 and 9.9 at. % at 2273, 2373 and 2520°K respectively. The solubility of ZrC in Mo is slight (0.2 at. % at 2273°K). The composition of the eutectic in the ZrC-Mo system is close to $Zr_{0.189}Mo_{0.811}C_{0.189}$ (80 wt. % Mo). On the basis of the literature and their own data, the authors suggest that the $Me^{IV}C$-Me^{VI} (TiC-Mo, TiC-W, ZrC-Mo, ZrC-W) sections in the corresponding ternary systems are quasi-binary and that the phase diagrams of these sections are of eutectic type. The acceptor capacity criterion 1/Nn of group IV metals forming isostructural carbides and data on the eutectic temperatures

Card 1/2

L 06294-67

ACC NR: AT6027150

in the TiC-Mo(W), ZrC-Mo(W) and HfC-Mo systems were used to find the eutectic temperatures in the HfC-W system (3200°K). Orig. art. has: 5 figures and 1 table.

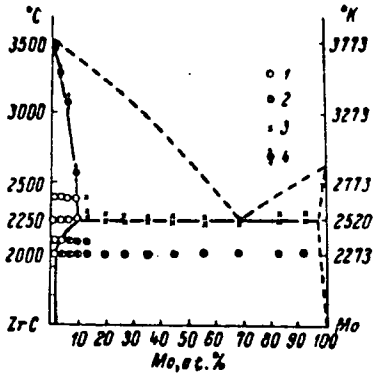


Fig. 1. Phase diagram of the ZrC-Mo system.
1 - single phase; 2 - two phases;
3 - start of fusion of two-phase alloys;
4 - start of fusion of single-phase alloys.

SUB CODE: 11/ SUBM DATE: 02Jul64/ ORIG REF: 011/ OTH REF: 013

Card 2/2

L 06553-67 EWT(m)/EWP(t)/ETI IJP(c) WW/JD/JG
ACC NR: AP6008266 (A) SOURCE CODE: UR/0080/66/039/002/0312/0317

AUTHOR: Ordan'yan, S. S.; Avgustinik, A. I.; Vigdergauz, V. Sh.

ORG: none

TITLE: The composition of alloys of the Zr-C-Nb system

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 312-317

TOPIC TAGS: fusible alloy, alloy composition, phase composition

ABSTRACT: Compositions of the fused alloys of the Zr-C-Nb system were determined permitting the construction of a triangular composition diagram at 2273°K. Because most phases have nonstoichiometric amounts of the elements, the precise intersections of the phases remain obscure. A ZrC-Nb composition-temperature diagram is hypothesized indicating the solubility of Nb in ZrC from 2000-3773°K. On the basis of the experiments, it is concluded that a ZrC-Nb alloy may be used as a heat-resistant construction material. Orig. art. has: 4 figures, 2 tables.

SUB CODE: 07/ SUBM DATE: 17Mar65/ ORIG REF: 005/ OTH REF: 007

UDC: 546.3-19'831'26'882

Card 1/1

L 06048-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6032298 SOURCE CODE: UR/0226/66/000/009/0050/0054

AUTHOR: Ordan'yan, S. S.; Avgustinik, A. I.

ORG: Leningrad Order of the Red Banner of Labor Technological Institute im. Lensovet (Leningradskiy ordena Trudovogo Krasnogo Znameni tekhnologicheskiy institut)

TITLE: Temperature dependence of the grain size of niobium carbide

SOURCE: Poroshkovaya metallurgiya, no. 9, 1966, 50-54

TOPIC TAGS: temperature dependence, grain size, grain growth, niobium carbide

ABSTRACT: An attempt has been made to investigate the temperature dependence of the grain size of nonstoichiometric niobium carbide $NbC_{0.80}$ in the temperature range 1600—3300K. The energy of grain growth activation is equal to 65.0 Kcal/mol. The value of this energy makes it possible to consider that this process is controlled by the boundary and surface diffusion. Orig. art. has: 2 figures. [Based on authors' abstract]

SUB CODE: 11/ SUBM DATE: 10Dec65/ ORIG REF: 007/ OTH REF: 007/

Card 1/1 mc

L 06576-67 EWT(m)/EWT(e)/EWT(w)/EWT(t)/ETI LJP(c) AT/WH/JD/JG
ACC NR: AP6029818 (A) SOURCE CODE: UR/0363/66/002/008/1439/1443

55

AUTHOR: Avgustinik, A. I.; Golikova, O. A.; Klimashin, G. M.; Neshpor, V. S.; Ordan'yan, S. S.; Snetkova, V. A.

ORG: Leningrad Institute of Technology im. Lensovet (Leningradskiy tekhnologicheskiy institut); Semiconductor Institute, Academy of Sciences SSSR (Institut poluprovodnikov Akademii Nauk SSSR)

TITLE: Dependence of certain electro- and thermophysical properties of zirconium monocarbide on the carbon content within the range of homogeneity

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1439-1443

TOPIC TAGS: zirconium carbide, solid mechanical property, solid physical property, electric conductivity, thermal emf, Hall coefficient

ABSTRACT: The dependence of electrical resistivity, absolute thermal emf, Hall coefficient, and thermal conductivity of zirconium monocarbide was studied for 36-48 atom % C contents in the carbide. The zirconium carbide samples were prepared by fusing high purity zirconium and carbon at 1800°C in vacuo followed by sintering at 2200°C. The properties, compositions, and lattice parameters for various zirconium samples are graphed and tabulated. It was found that free electrons act as current carriers within zirconium carbide. The electrical resistivity, the thermal emf, and the Hall coefficient were found to decline and the thermal conductivity was found to increase with

UDC: 546.831'261:541.12.03

Card 1/2

L 06576-67

ACC NR: AP6029818

declining contents of the combined carbon in zirconium monocarbide. This phenomena are related to the release of a portion of the zirconium electrons from the localized metal-carbon bonds. The specific resistivity and absolute thermal emf were found to increase linearly with increasing temperature. The slope of these lines was found to decrease with decreasing carbon content in zirconium carbonate. This phenomenon is apparently due to the decline in the effective mass of the conduction electrons. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,20/SUBM DATE: 060ct65/ ORIG REF: 013/ OTH REF: 015

Card 2/2

ORDAS, I.

Work with shop organization on collective farms. p. 32. Vol. 2, No. 1 Jan. 1956. AGRICULTURE. Budapest, Hungary.

SOURCE: East European List, (EEAL) Library of Congress Vol. 6, No. 1 January 1956.

ORDAS, I

ORDAS, I. The increase of livestock on collective farms near Berkata. p. 372

Vol. 8, No. 8, August 1956
AGRARTUDOMANY
AGRICULTURE
Budapest

SO: EAST EUROPEAN ACCESSIONS, Vol. 6, No. 3, March 1957

ORDAS, Ivan, ujsagiro

Sociography of Diosgyor. Munka 11 no.8:20-21 Ag '61.

(Hungary—Social conditions)
(Hungary—Labor and laboring classes)

ORDAS, Ivan

Spring in Nemesgulacs. Hung TU no.5:6-7 My '62.

ORDEGA, Jerzy, dipl. ing. (Poland)

Energy balance of an industrial establishment. Ipari energia
5 no.1:57 M '64.

ORDELLI, M.A., inzhener.

Experience with using screw piles in building marine hydraulic structures. Nov.tekh.i pered. op. v strei. 18 no.7:10-14 Jl '56. (Piling (Civil engineering)) (MLRA 9:9)

ORDELLI, M., inzhener.

Screw piles in elevator construction. Muk.-elev.prom. 22 no.2: 23 F '56. (MLRA 9:6)

1.Trest Yuzhgidrostroy.
(Grain elevators) (Piling (Civil engineering))

ORDELLI, M.A., inzhener.

Screw piles in hydraulic engineering. Gidr.stroi.25 no.8:18-20 S '56. (Piling (Civil engineering)) (MLRA 9:10)

ORDELLI, M.A., inzhener.

Using precast reinforced concrete in building chute spillways.
Gidr.stroi. 25 no.10:9-11 N '56. (MLRA 9:12)
(Spillways) (Reinforced concrete construction)

ORDELLI, Mikhail Arkad'yevich

SHIKHIYEV, Fuad Maksimovich, kandidat tekhnicheskikh nauk; ORDELLI, Mikhail Arkad'yevich, inzhener; TSEYTLIN, Grigoriy Yul'yevich, inzhener; PLAKIDA, M.E., redaktor; SAFONOV, P.V., redaktor izdatel'stva; TIKHONOVA, Ye.A., tekhnicheskiy redaktor

[Experience in building hydraulic structures] Opyt stroitel'stva gidrotekhnicheskikh sooruzhenii. Moskva, Izd-vo "Morskoi transport," 1957. 118 p. (MLRA 10:9)
(Hydraulic engineering)

ORDELLI, M.A., inzh.

Constructing slipways without ties. Transl. stroi. [illegible].2:5-7 F '58. (MIRA 11:2)

(Ships--Launching)

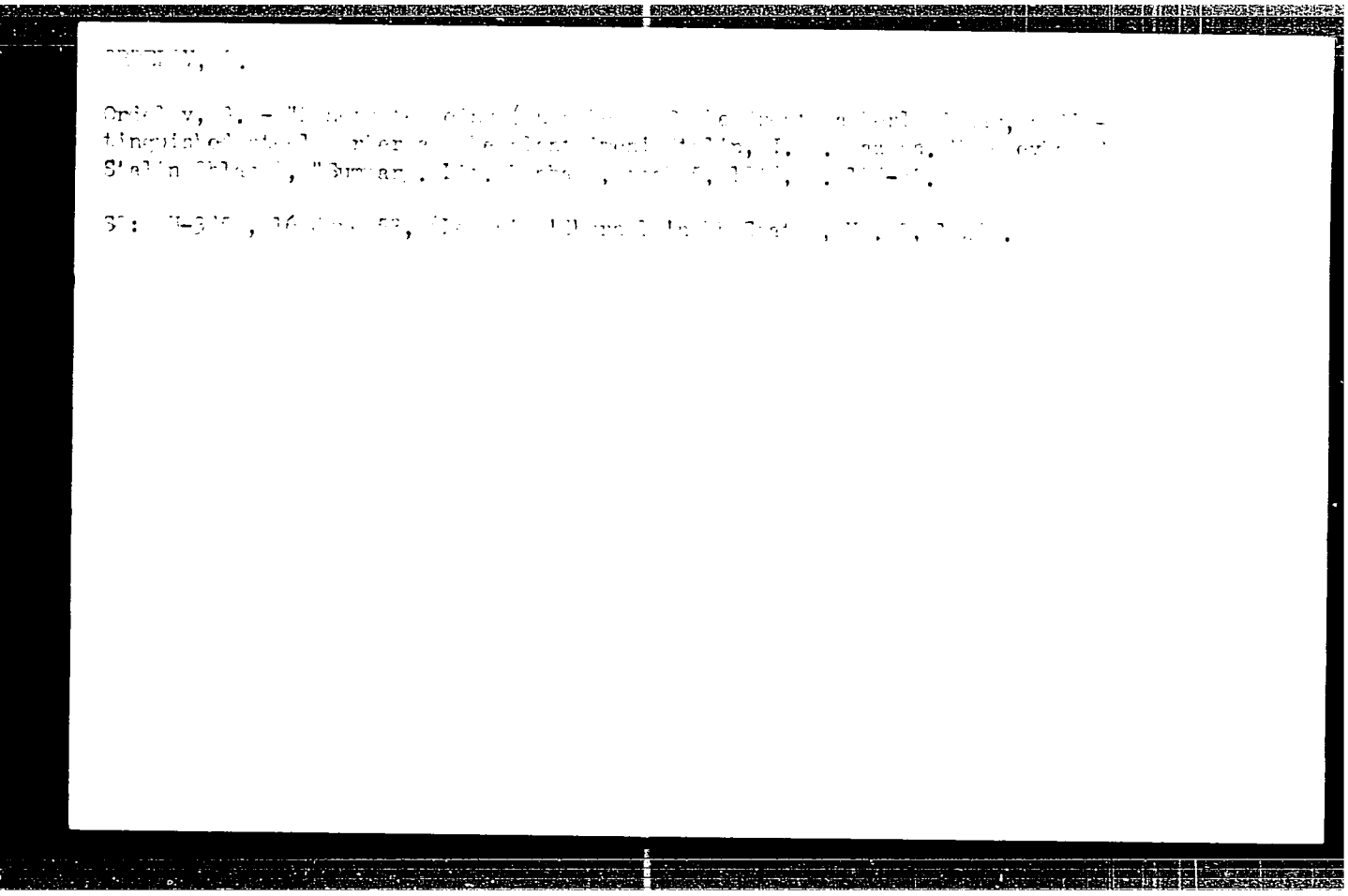
ORDELLI, M.A., inzh.

Experience in the use of screw piles. Energ. stroi. no.31: 86-93 '62. (MIRA 16:7)

1. Odesskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.
(Piling(Civil engineering))

ORDF[illegible] M.A[illegible] inz[illegible].

[illegible] flat precast reinforced concrete plate liners in the construction of circular drop wells. Energ[illegible] str[illegible]. no.1:89-91 '6[illegible]. (MIRA 14:[illegible])



Czechoslovakia /Chemical Technology. Chemical Products I-25
and Their Application

Synthetic polymers. Plastics.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32458

Author : Ordelt Oldrich

Title : New Instrument for the Determination of the Resilience of Sheet Plastics and Leather

Orig Pub: Chem. prumysl, 1955, 5, No 5, 209-212

Abstract: Resilience of the material as determined by means of the device is expressed by the force (in g) which must be applied to an annular specimen in order that its diameter be decreased from 30 to 15 mm in the direction in which the

Card 1/2

Czechoslovakia / Chemical Technology. Chemical Products and Their Application I-25

Synthetic polymers. Plastics.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32458

force is acting. The instrument permits determinations at temperatures from 70° to - 30°, and can be used for determination of the resilience of plasticized polyvinyl chloride.

Card 2/2

ORDELT, C.

"Determining the frost resistance of plastic leather."

p. 28 (Kozarstvi) Vol. 6, no. 2, Feb. 1956.
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

ORDELT, Oldrich

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Leather. Fur. Gelatin. Tanning Agents. Technical Proteins I-29

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14076

Author : Ordelt Oldrich
Title : Determination of Frost Resistance of Plastic Leather

Orig Pub : Chem. prumysl. 1956, 6, No 6, 240-243

Abstract : A new procedure has been worked out for the determination of frost resistance of plastic leather (leather substitutes), which is based on repeated compression and stretching of the sample under study, while cooling it by means of a special apparatus. Frost resistance is rated by the number of flexures after which damage of the layer of plastic material takes place. Notwithstanding considerable variations in values obtained on testing the same sample, the general evaluation of its frost resistance can be regarded as accurate. The apparatus is

Card 1/2