KARABAN, Stepan Ignat'yevich (Minsk Pedagogical Inst im. Gor'kiy) for Doc of Philological Sci on the basis of dissertation defended 27 Jun 55 in Council of Belorussian State University im. Lenin, entitled: "Philosophy and Basic Problems of the Works of Yanko Kupala."

(BMViSSO USSR, 2-61, 22)

KARABAN, T.

"Avation House in Moscow, p. 832, (SKRZYDLATA POLSKA, Vol. 10, No. 52, Dec. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC. Vol. 4, No. 5, May 1955, Uncl.

KARAŚAN, T.

To the attention of Polish representatives. p. 10

SKRZYDIATA POLSKA. (Ligo Lotnicza) Warszawa, Poland. Vol. 11, no. 28, July 1955,

Monthly List of East European accession (EEAI), LC. Vol. 8, No. 9, September, 1959, Uncl.

(N) SOURCE CODE: UR/0124/66/000/006/A015/A...

ACC NR: AR6030394

AUTHOR: Shteynvol'f, L. I.; Karaban, V. N.

TITLE: The application of a pendulum antivibrator with viscous friction in multimass rotating systems

SOURCE: Ref. zh. Mekhanika, Abs. 6A102

REF SOURCE: Dinamika i prochnost' mashin. Resp. mezhved. nauchno-tekhn. sb., vyp. 1, 1965, 41-46

TOPIC TAGS: pendulum, partial differential equation

TRANSLATION: It is known that friction between the hub and mass of a pendulum antivibrator, unavoidable in actual constructions, reduces the effect of the operation of the antivibrator. The case studied is where viscous friction is specially introduced into the pendulum antivibrator. This reduces the antivibration properties but has an effective damping action. The investigation is carried out for the case of a two-mass rotating system. The differential equations for the motion of such a system with one pendulum on a bifilar suspension are written out. A study of the solution and the choice of optimal parameters are made by the method of invariant points. Graphs are included to show the dependence of motion parameters on the coefficients of viscous friction in the antivibrator. It is shown that a zone exists in which the pendulum

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Card 2/

ROZUM, Yu.S.;SEREBRYANYY, S.B.; KARABAN, Ye.F.; CHERNETSKIY, V.P.; DRONKINA, M.I.

Influence of the polar substituents on the reduction potentials of mono- and disubstituted derivatives of phenazine and its N-oxides. Zhur. ob. khim. 34 no.8:2599-2603 Ag '64. (MIRA 17:9)

1. Institut organicheskoy khimii AN UkrSSR.

GUSEV, Leonid Mikhaylovich, kand.tekhn.nauk; KARABAN, Yu.L., red.; AVRUSHCHENKO, R.A., red.izd-va; VOLKOV, S.V., tekhn.red.

[Ice control on roads] Bor'ba so skol'zkost'iu obledenevshikh dorog. Izd.2., perer. i dop. Moskva, Izd-vo M-va kommun. khoz.RSFSR, 1959. 120 p. (MIRA 12:12)
(Ice) (Roads--Maintenance and repair)

KARABANOV, A.I.; KOSTRYUKOV, K.S.

Compressorless unit for heating bitumen and bituminous mastics. Suggested by A.I.Karabanov, K.S.Kostriukov. Rats.i izobr.predl. v stroi. no.13:120-122 '59. (MIRA 13:6)

1. Stalingradskoye stroitel'no-montazhnoye upravleniye.
(Bitumen)

GERASIMOV, I.V.; KARABANOV, D.N.

Purifying sewage from petroleum refineries by electric flotation.
Izv. vys. ucheb. zav.; neft' i gaz 4 no.11:59-63 '61.
(MIRA 17:2)

1. Ufimskiy neftyanoy institut.

ACCESSION NR: AP50[illegible] UR/0286/65/[illegible]

AUTHOR: [illegible]

TITLE: Multipoint automatic balanced bridge. Class [illegible], No. [illegible]

[illegible]

TOPIC TAGS: bridge circuit

ABSTRACT: This Author Certificate presents a multipoint automatic [illegible]

[illegible]

ASSOCIATION: none

SUBMITTED: 29Jun64 ENCL: 0[illegible]

NO REF SOV: 00[illegible] OTHER: 00[illegible]

[illegible]

ACCESSION NR: AP[illegible]

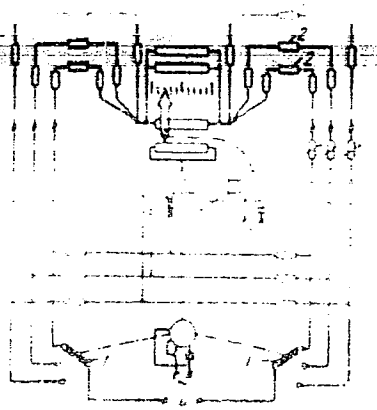

Fig. 1. Multipoint automatic balanced bridge
1- measuring instrument; 2- resistances to be measured;
3- zero point amplifier; 4- power supply

Card 2/2

KOL'TSOV, A.A.; KARABANOV, D.N.

Automatic symmetric balanced bridge. Izv. vys. ucheb. zav.; prib. 8 no.3:29-32 '65. (MIRA 18:11)

1. Ufimskiy neftyanoy institut. Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.

KOL'TSOV, A.A.; KARABANOV, D.N.

Designing measuring circuits of automatic balanced electronic bridges. Izv.vys.ucheb.zav.; prib. 7 no.2:39-45 '64.

(MIRA 18:4)

1. Ufimskiy neftyanoy institut. Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.

KARABANOV, F. F.

BOGOMOLOV, B.D., kand.tekhn.nauk; MEL'NIKOV, S.F., inzh.; KARABANOV, F.F., inzh.

Woodpulp and paper industry of Archangel Province. Bum.prom. 32 no.11:23-27 N '57. (MIRA 11:1)
(Archangel Province--Paper industry)
(Archangel Province--Woodpulp industry)

KARABANOV, I.I., inzh.

Specific gravity parameters of a crawler tractor. Trakt. i sel'khozmash. 33 no.9:10-11 S '63. (MIRA 16:10)

1. Chelyabinskiy traktornyy zavod.
(Crawler tractors)

KARABANOV, I.I., inzh.

Ways of increasing the longitudinal base of a tractor and the metal requirements. Stroi. i dor. mash. 9 no.3:20-21 Mr '64. (MIRA 17:6)

KARABANOV, I.I., inzh.

Selecting the type of suspension for a crawler tractor. Trakt. i sel'khozmash. no.6:9-12 Je'64 (MIRA 17:7)

1. Chelyabinskiy traktornyy zavod.

KARABANOV, I.I., inzh.

Remarks on the article by I.S. Kav'iarov and B.M. Pozin.
Trakt. i sel'khozmash. 33 no.3:19-20 Mr '63.
(MIRA 16:11)

KARABANOV, I.I., inzh.

Working system of the ChTZ tractor. Trakt.i sel'khozmash. 32 no.9:9-11 S '62. (MIRA 15:12)

1. Chelyabinskiy traktornyy zavod.
(Crawler tractors)

IMAS, A.D., inzh.; KARABANOV, M.G., inzh.

Geometric shapes of cutters for rotary boring and kinematics of their motion. Ugol' Ukr. no.6:21-23 Je '61. (MIRA 14:7)

(Rock drills)

ZASLAVNOV, D.I., gornyy inzh.; KARABANOV, M.G., gornyy inzh.; ZHIGUL'SKIY, I.P., gornyy inzh.; GRIGOR'YAN, Kh.M.

Results of testing the BK-2 cutter-loader. Ugol' 38 no.8:41-45 Ag '63. (MIRA 17:11)

1.Shakhtinskiy nauchno-issledovatel'skiy i proyektno-konstruktorskiy ugol'nyy institut (for Zaslavnov, Karabanov, Zhigul'skiy). 2. Gosudarstvennyy proyektno-konstruktorskiy i eksperimental'nyy institut ugol'nogo mashinostroyeniya (for Grigor'yan).

ZASLAVNOV, D.I., inzh.; KARABANOV, M.G., inzh.; ZHIGUL'SKIY, I.P., inzh.

Dust control of the working area of a longwall during the operation of the KTST cutter-loader. Bezop.truda v prom. 7 no.2:24-25 F '63. (MIRA 16:2)

1. Shakhtinskiy nauchno-issledovatel'skiy i proyektno-konstruktorskiy ugol'nyy institut.

(Mine dusts—Safety measures)

USTINOV, V.T., inzh.; KARABANOV, N.G.

Valve with a two-side action. Masl.-zhir.prom. 28 no.8:36 Ag '62.
(MIRA 17:2)

1. Krasnodarskiy maslozhirovoy kombinat imeni V.V.Kuybysheva.

NIKITIN, V.G.; KARABANOV, M.I.

Two-position four-station turntable for 7B720 broaching machine. Mashinostroitel' no.5:27-28 My '60. (MIRA 14:5)
(Broaching machines)

KARABANOV, M.I.; NIKITIN, V.G.

Device for cutting faces and removing edges. Mashinostroitel' no.1:29 Ja '63. (MIRA 16:2)

(Cutting machines)

KARABANOV N. I.

89-3-8/30

AUTHORS: Sokolov, M. M. , Ochkur, A. P. , Fedorov, A. A. , Karabanov, N. I.

TITLE: The Photo-Electric Absorption of Scattered γ-Rays (Foto-elektricheskoye pogloshcheniye rasseyannogo γ-izlucheniya)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 3, pp. 284 - 285 (USSR)

ABSTRACT: The measurement of the γ-spectrum was carried out by means of a scintillation spectrometer to which a multichannel pulse analyzer was connected. As γ-radiator Tl-204, Hg-203, Cr-51, Cs-137 and Zn-65 were used, and the distance between the detector and the radiator was varied between 5 and 15 cm. For the case Cr-51, D = 10 cm, and with sand as scattering material, which once contained 0,5 %, then 2 %, 5 % of lead and 10 % of copper the measured scattering spectrum is graphically represented.

At about 100 KeV a minimum can be observed in the γ-spectrum which coincides with theoretical calculations. Within the range of about 150 KeV a more marked decrease is to be seen which corresponds to the single scattering of γ-quanta

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The Photo-Electric Absorption of Scattered γ-Rays

with minimum energy. In theoretical calculation this energy turns out to be 145 KeV.
The admixtures of lead considerably change the spectrum, not only decreasing the number of pulses but causing a depression which is to be seen within the range of 100 KeV, being dependent on the greatly increased photo-electric absorption coefficient for the γ-radiation, the energy of which approaches that of the K-binding energy of lead (88,2 KeV). Analogous pictures are given by all radiators investigated. There is 1 figure.

SUBMITTED: July 22, 1957

AVAILABLE: Library of Congress

1. Scattered γ-Rays-Photoelectric absorption 2. γ-Spectrum-Measurement 3. Scintillation spectrometers-Applications

Card 2/2

KARABANOV, N.I.

AUTHORS: Sokolov, M. M., Karabanov, N. I. 48-1-18/20

TITLE: The Field γ Radiometer SG-42 (Polevoy γ Radiometr -SG-42)

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1958, Vol. 22, Nr 1, pp. 88 - 89 (USSR)

ABSTRACT: The authors worked out a portable apparatus with a scintillation counter for measuring γ-rays with an energy of from 50 keV and more. The apparatus is produced by the industry under the name "Field-γ-Radiometer CГ-42". A NaJ-Tl-crystal with d=30 and l=25 mm, as well as a photomultiplier ФЭУ-19 M are used in the apparatus. Optical contact between the crystal and the photomultiplier is brought about by means of an organosilicon liquid. The device has 3 scales: 1) 0 ÷ 50μ hour^{-1}, 2) 0 ÷ 150μ hour^{-1}, 3) 0 ÷ 700 - 800μ hour^{-1}. The first two are linear, the third is nonlinear. The sensitivity-threshold of the device at a natural bachground of 6 ÷ 7μ hour^{-1} amounts to 2μ hour^{-1}. The sensitivity of the device for the radium-source amounts to about 180 ÷ 200 pulses / min^{-1} per 1μ hour^{-1}. The time constants of the device for the 3 scales are 4,2 sec, 2,2 sec and 1,2 sec respectively. The relative error can be determined according to the fluctuation of the device-indications or according to the formula

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given here. The device weighs 5 kg. The stability of indication is sufficiently high in the temperature range of -10 ÷ +40°. The device is mainly determined for geological prospecting. When the NaJ-Tl-crystal is replaced by suitable phorphors the device can be used for the recording of rapid and slow neutrons. There are 1 table and 1 figure.

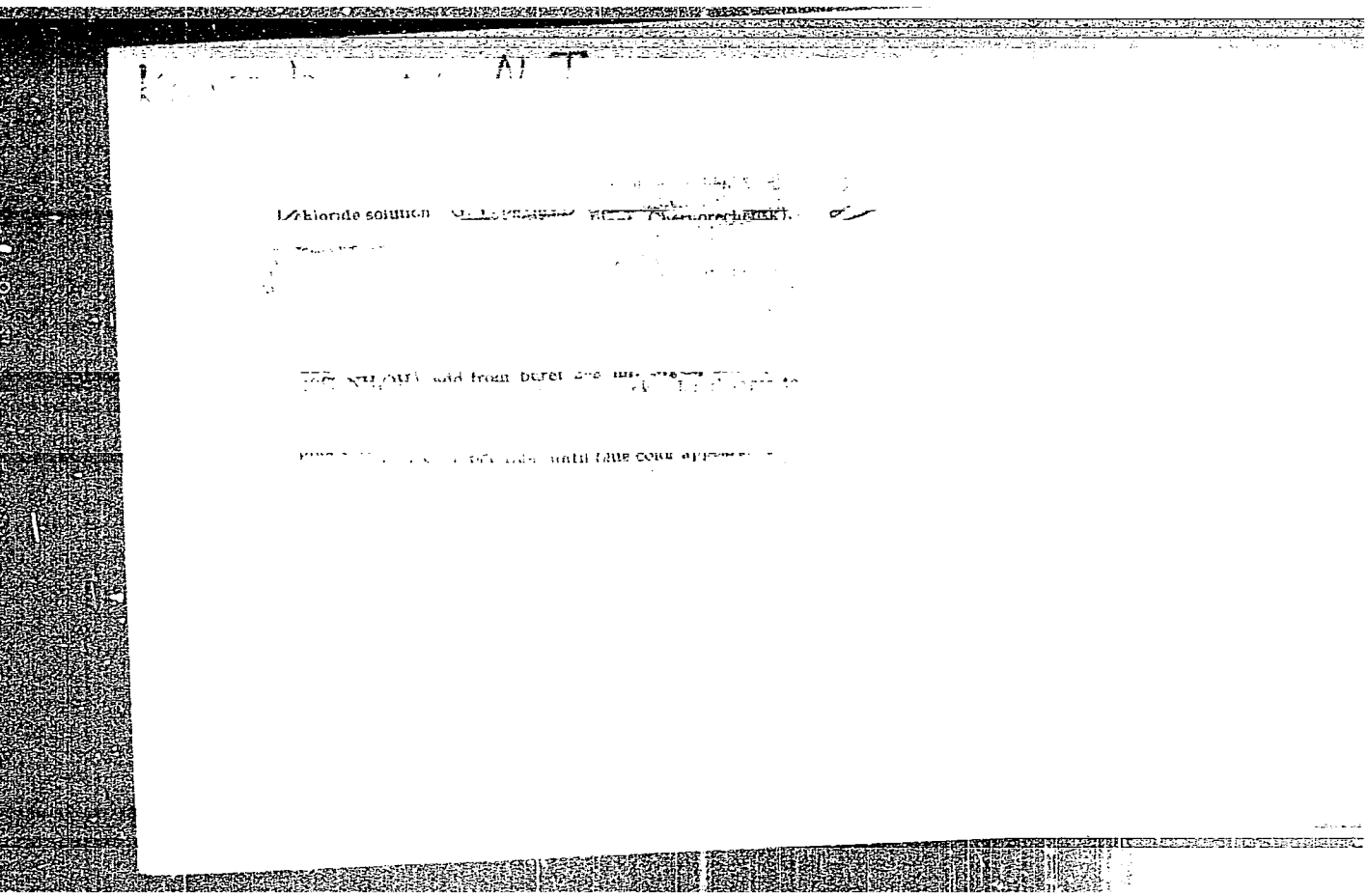
AVAILABLE: Library of Congress

1. Crystals 2. Neutron counters

KARABANOV, N.S.

Working with contour maps. Geog. v shkole 20 no.1:50-53 Ja-F '57.
(MIRA 10:3)

1. Kondrovskaya shkola Kaluzhskoy oblasti.
(Geography--Study and teaching)
(Maps)



KARABANOV, N.T.; ZORIN, A.D.

Equilibrium between liquid and vapor in binary and ternary systems formed by bivinyl with isomers of n-butane and butylene. Trudy po khim.i khim.tekh. no.1:3-14 '64.
(MIRA 18:12)

1. Submitted July 9, 1963.

VLADOV, D.; KARABANOV, St.; DIMITROV, D.; DIAKOVICH, V; Dinkov, Sh.

Air pressure in the evacuated sampling flasks for nitric oxides, and its influence on the quantity of nitric oxides in the catalytic oxidation of ammonia. Godishnik khim 55 no.3:129-134 '60/61 (publ.'62).

KLIMOV, S.; KARABANOV, S.

Modernization and effective use of grain dryers. Muk.-elev. prom. 29 no.2:5-7 F '63. (MIRA 16:8)

1. Tekhnicheskoye upravleniye Vserossiyskogo ob"yedineniya khleboproduktov (for Klimov). 2. Institut nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosudarstvennogo komiteta zagotovok (for Karabanov).
(Grain--Drying)

KARABANOV, S.

Advantages of the truck dumper with hydraulic drive. Muk.-elev.prom. 21 no.5:12-14 My '55. (MLRA 8:9)

1. Ministerstvo zagotovok SSSR. (Dumping appliances)

FINASHIN, I.S., inzhener; KARABANOV, S.A., inzhener.

Device for pack-loading grain into railroad cars. Zhel. dor. transp. 38 no.8:75 Ag '56. (MLRA 9:10)

(Loading and unloading) (Grain--Transportation)

KAMABANOV, S., inzh.

Self-propelled automatic feeder for grain. Muk. elev. prom. 23 no.12: 11-12 D '57. (MIRA 11:2)

1. Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR.
(Grain handling machinery) (Loading and unloading)

KARABANOV, S., inzh.; FROLOV, N., inzh.

Device for the even loading of grain into railroad cars. Muk.-elev. prom. 24 no.1:5-8 Ja '58. (MIRA 11:2)

1.Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR.
(Grain—Transportation)
(Loading and unloading)

KARABANOV, S.

KARABANOV, S., inzh.

Radial self-feeder for grain. Muk.-elev.prom.24 no.2:7-10 F '58.
(MIRA 11:4)

1. Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR.
(Conveying machinery)

DIL', A.; CHARUGINA, N.; BORODIN, A.; SOLODOVNIK, P.; SKLYAR, I.; SOLOVKIN, N.; POTAPOV, G.; PONOMAREV, N.; ALEKHIN, I.; SOLOMENTSEV, K.; TOPYLIN, N.; SKOROVAROV, M.; KARABANOV, S.; BOGDANOV, N.; STRYUKOV, P.

Nikolai Vasil'evich Romenskii (on the occasion of the 40th anniversary of his scientific, pedagogic, and public activity). Muk.-elev. prom. 24 no.12:29-30 D '58. (MIRA 12:1)
(Romenskii, Nikolai Vasil'evich, 1894-)

KLIMOV, Stepan Yegorovich; KARABANOV, Sergey Aleksandrovich; DZHOROGYAN, G.A., kand. tekhn. nauk, red.; VYSOTSKAYA, R.S., red.; GOLUBKOVA, L.A., tekhn. red.

[Grain driers with furnaces operating on liquid and gas fuels] Zernosushilki s topkami, rabotaiushchimi na zhidkom i gazoobraznom toplive. Pod red. G.A.Dzhorogiana. Moskva, Izd-vo tekhn. i ekon. lit-ry po voprosam zagotovok, 1961. 77 p. (MIRA 14:12)
(Grain—Drying)

KARABANOV, S., inzh.

Receiving and processing grain in a continuous operation at the Adyrsk Grain Receiving Station. Muk.-elev. prom. 27 no.1:8-9 Ja '61. (MIRA 14:1)

1. TSentral'noye byuro tekhnicheskoy informatsii Goskhlebkomiteta.
(Akmolinsk Province—Grain elevators)

PYSHKIN, Viktor Petrovich, inzh.; KARABANOV, Sergey Aleksandrovich, inzh.; PONOMAREV, Vladimir Aleksandrovich, inzh.; FROLOV, K.P., inzh., red.; VOLKOV, P.N., red.; SAVEL'YEVA, Z.A., tekhn. red.

[Manual for the mechanic of a grain receiving station] Spravochnik mekhanika khlebopriemnogo punkta. Pod red. K.P. Frolova. Moskva, Zagotizdat, 1963. 243 p. (MIRA 16:9)
(Grain handling machinery)

KARABANOV, V.A., kand.tekhn.nauk, red.; FRIDMAN, V.Ya., red.; KLIMENKO, S.V., tekhn.red.

[Frequency methods in automatic control; a collection of articles. Translations] Chastotnye metody v avtomatike; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1957. 490 p. (MIRA 11:7)
(Automatic control)

KARABANOV, V.A.

LERNER, Aleksandr Yakovlevich; KARABANOV, V.A., kand.tekhn.nauk, retsenzent; ROZENMAN, Ye.A., kand.tekhn.nauk, red.; POLYAKOV, G.F., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Introduction to the theory of automatic control] Vvedenie v teoriiu avtomaticheskogo regulirovaniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 351 p. (MIRA 11:4)
(Automatic control)

KARABANOV, V.A.

28(1) P.4 PHASE I BOOK EXPLOITATION SOV/3317

Moscow. Vyssheye tekhnicheskoye uchilishche. Kafedry "Avtomatika i telemekhanika"

Sistemy avtomaticheskogo regulirovaniya i upravleniya; nekotoryye voprosy teorii i tekhniki (Automatic Regulating and Control Systems; Some Problems in Theory and Technology) Moscow, Mashgiz, 1959. 166 p. (Series: Its Trudy, sbornik no. 97) 7,600 copies printed.

Ed.: V.K. Titov, Candidate of Technical Sciences; Tech. Ed.: Z.I. Chernova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: The book is intended for teachers in schools of higher education, and for engineers and technicians engaged in problems of automation.

COVERAGE: This collection contains articles on the theory and technique of automatic regulation and control. The problems discussed concern calculation of optimum parameters of low-power servomechanisms, correction of a-c systems and systems of automatic regulation with a delay unit, and the construction of self-adjusting a-c systems. Several methods of improving the dynamic properties of servomechanisms, and methods of approximate investigation of pulse servo-

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mechanisms, are also explained. Some considerations regarding possible ways of automating butt welding in a random direction are presented. The authors of this collection are all instructors in the department of "Automation and Remote Control" at MVTU imeni Bauman. The articles are based on scientific research work conducted by the department during the last five years. Some personalities are mentioned in each article. References are given after each article.

TABLE OF CONTENTS:

A.J. Kukhtenko and other Ukrainian scientists contributed much to the advancement of the theory and methods of developing combined systems of automatic regulation and control. A tendency to unite the problems of combined systems and of self-adjusting systems appears in the works of V.V. Solodovnikov and A.M. Batkov (1956). The author summarizes the basic ideas of the Soviet scientists on the above problems.

Bibliography 14

Shramko, L.S., Candidate of Technical Sciences. Problem of Self-adjusting Systems 15

The author investigates some a-c systems which develop an error signal of the type $U_{\varepsilon}(t)\cos\omega_0 t$. This signal, amplified and converted accordingly, is used for the control of certain actuating units (frequently, two-phase induction motors). There are two ways of converting this error signal:

1) with demodulation preceding the conversion of the a-c signal;
2) without intermediate demodulation

The author considers systems of the second type the more advantageous because of the absence of additional demodulating and modulating devices.

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L 25797-66 EEC(k)-2/EWT(d)/FBD/EWP(1)/FSS-2 IJP(c) BC

ACC NR: AM6008539 Monograph UR/

Lebedev, Aleksandr Aleksandrovich; Karabanov, Vladimir Aleksandrovich

Dynamics of control systems of pilotless aircraft (Dinamika sistem upravleniya bespilotnymi letatel'nymi apparatami) Moscow, Izd-vo "Mashinostroyeniye," 1965. 528 p. illus., biblio. Errata slip inserted. 6000 copies printed. Textbook for students at aviation schools and faculties.

TOPIC TAGS: flight control system, stabilization system, aircraft flight dynamics, missile guidance system, homing guidance, pilotless aircraft, guidance system, aircraft motion, stabilization system component, gyroscope, ballistic missile, missile dynamics, missile velocity control, guidance error, remote guidance system

PURPOSE AND COVERAGE: This book is the second part of the textbook "Flight Dynamics of Pilotless Aircraft," written by A. A. Lebedev and L. S. Chernobrovkin; it is intended for students in advanced courses in institutions of higher technical education and may be used by scientific workers and engineers in related fields. Flight dynamics as related to control processes is reviewed. Necessary information on the dynamics of components found in a flight-control system is given, and principles for the synthesis of stabilization and guidance systems are presented. Methods for calculating these

Card 1/6 UDC: 623.746-519:62-50.001:11(07)

systems are examined, and stabilization and guidance processes are investigated with particular respect to the analysis of guidance accuracy. The authors express appreciation to reviewers L. T. Kuzin, I. Ye. Mitrofanov, E. F. Fatkhullin, and engineer L. I. Kir'yanov for their assistance in preparing the manuscript for print.

TABLE OF CONTENTS [abridged]:

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ACC NR: AM6008539

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ACC NR: AM6008539

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L 25797-66

ACC NR: AM6008539 O

SUB CODE: 09, 16, 17/ SUBM DATE: 07Oct65/ ORIG REF: 146/ OTH REF: 18

Card 6/6 CC

RENNE, Vladimir Tikhonovich, doktor tekhn.nauk, prof.; BERKU, Adrian [Bercu, A.], inzh.; KARABANOV, Valentin Iosifovich, inzh., kand.-tekhn.nauk, nauchnyy sotrudnik; KOZYREVA, Mariya Semenovna, kand.-tekhn.nauk, nauchnaya sotrudnitsa

Study of a saturation liquid for power condensers. Izv. vys. ucheb. zav.; elektromekh. 5 no.12:1424-1428 '62. (MIRA 16:6)

1. Zaveduyushchiy kafedroy elektroizolyatsionnoy i kabel'noy tekhniki Leningradskogo politekhnicheskogo instituta (for Renne). 2. Bukharestskiy institut elektrotekhnicheskikh issledovaniy (for Berku). 3. Leningradskiy politekhnicheskiy institut (for Karabanov, Kozyreva).

(Condensers (Electricity)) (Electrolyte solutions)

RENNE, V.T., doktor tekhn.nauk prof.; KARABANOV, V.I., inzh.; KOZYREVA, M.S., inzh

Investigation of the aging of paper condensers saturated with castor oil. Izv.vys.ucheb.zav.; energ. 2 no.8:46-51 Ag '59. (MIRA 13:2)

1. Leningradskiy politekhnicheskiy institut imeni M.I.Kalinina. Predstavlena kafedroy elektroizolyatsionny i kabel'noy tekhniki.
(Electric capacitors)

KARABANOV, V. I. Cand Tech Sci — (diss) "Investigation of impregating compositions for paper radiocondensers," Leningrad, 1960, 18 pp, 150 cop. (Leningrad Polytechnical Institute im M. I. Kalinin) (KL, 44-60, 130)

ACC NR: AR6023372 SOURCE CODE: UR/0274/66/000/003/A080/A080

AUTHOR: Kolesov, S. N.; Karabanov, V. M.

TITLE: Increasing the sensitivity and accuracy of the resonant dielectric loss measurement method

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 3A582

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 155-162

TOPIC TAGS: electric measurement, dielectric loss, circuit design

ABSTRACT: A method for calibrating and improving the dielectric loss measurement circuit is proposed. The sensitivity in measuring tan δ by this resonant method may be increased up to 1×10^{-5} with an error which does not exceed ±5%. The method accounts for the frequency losses at the hf range of the measurement circuit's characteristic when it is calibrated by means of non-reactive impedances. In this method, a series of measurements are made using the KV-1 and UK-1 equipment. A low-resistance π attenuator designed for a 10 db attenuation is introduced in front of the coupling resistance. The vacuum tube voltmeter circuit is replaced by a diode peak detector capable of dc amplification. A particular balancing sequence and calibration procedure is recommended. [Translation of abstract] Bibliography of 7 titles. A. K.

SUB CODE: 09

Card 1/1 UDC: 621.317.799.029.6

KARABANOV, V.S.

Actinomycosis of the female genitalia. Akush. gin. no.6:51-55 Nov-Dec 1953. (CLML 25:5)

1. Moscow.

KARABANOV, V.S.

Treatment of anemia in pregnancy [with summary in English]. Akush. i gin. 34 no.4:31-36 Jl-Ag '58 (MIRA 11:9)

1. Iz Nauchno-issledovatel'skogo instituta akusherstva i ginekologii (dir. - dots. L.G. Stepanov) Ministerstva zdravookhraneniya RSFSR.

(PREGNANCY, compl.
anemia, ther. (Rus))
(ANEMIA, in pregn.
ther. (Rus))

SOLODOVNIKOV, V.V., doktor tekhn.nauk, prof.; KARABANOV, V.V., kand.tekhn. nauk, dotsent

"Structural methods in the theory of control and electronic automatic control" by A.S.Shatalov. Reviewed by V.V.Solodovnikov. Elektrichestvo no.9:94-96 S '63. (MIRA 16:10)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche im. Baumana.

VERBA, M.I., kand.tekhn.nauk, dotsent; KARABANOV, Yu.F., inzh.

Inductive telemetering scales. Izv. vys. uchet. zav.; energ. 4 no.10:123-124 O '61. (MIRA 14:11)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy sushil'nykh i teploobmennykh ustroystv.
(Telemetering) (Scales (Weighting instruments))

KARABANOV, Yu.F., kand. tekhn. nauk; KONOVALOV, V.I., kand. tekhn. nauk; KULAKOVA, M.I., kand. tekhn. nauk; SEMEIN, V.M., kand. tekhn. nauk

Review of the book "Collection of problems in engineering thermodynamics". Edited by [prof.] M.P. Vukalovich. Reviewed by IU. F. Karabanov, V.I. Konovalov, M.I. Kulakova, V.M. Semein. Izv. vys. ucheb. zav.; energ 7 no.9:114-115 S '64.

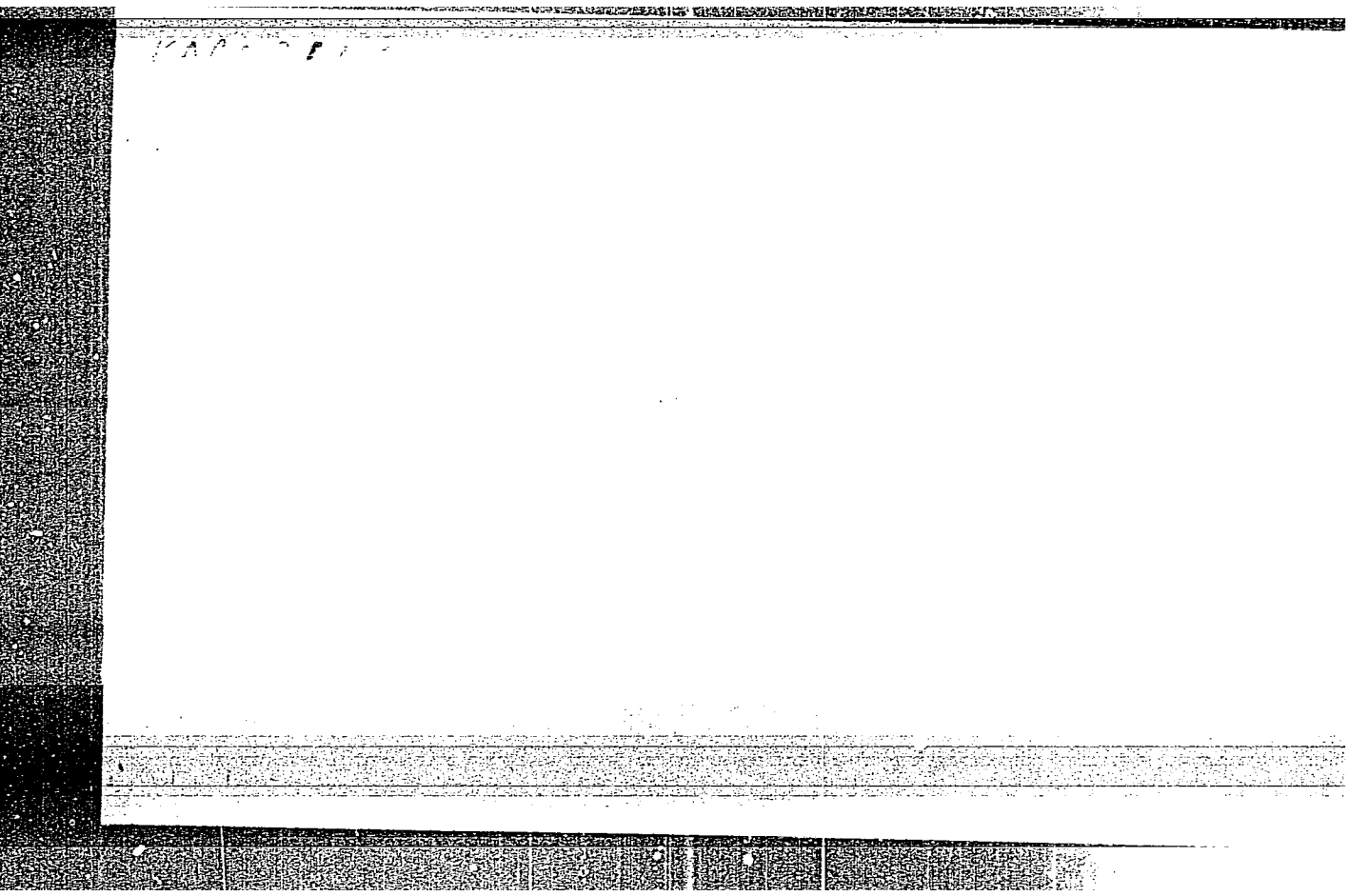
(MIRA 17:11)

1. Ivanovskiy energeticheskiy institut imeni V.I. Lenina.

NALIVAYKO,Yu.S.; KARABANOV,Yu.V.

Effect of types of potassium fertilizers on hops drops. Dop. AN URSR no.3:303-306 '55. (MLRA 8:11)

1. Zhitomirs'ka naukovo-doslidcha stantsiya khmelyarstva. Predstaviv diysniy chlen Akademii nau, URSR P.A.Vlasyuk
(Hops) (Fertilizers and manures)



APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720520011-3"

KUZIN, Lev Timofeyevich; PEROV, V.P., doktor tekhn. nauk, retsenzent; KARABANOV, V.A., kand. tekhn. nauk, red.; UVAROVA, A.F., tekhn. red.

[Design and planning of discrete control systems] Raschet i proektirovanie diskretnykh sistem upravleniia. Moskva, Mashgiz, 1962. 682 p. (MIRA 15:6)

(Automatic control)

CHUCHA, V.G., inzh.; KARABANOVA, A.V., inzh.

Multitool machining of slide surfaces of machine-tool beds.
Mashinostroenie no.4:46-47 Jl-Ag '65. (MIRA 18:8)

SLONOV, M.N., zooparazitolog; Prinimali uchastiye: BELIKOVA, N.P., parazitolog po iksodovym kleshcham; TATARINOVA, L.G., virusolog; KARABANOVA, E.M., laborant; SOTNIKOVA, T.I., laborant

Zooparasitic characteristics of a natural focus of tick-borne encephalitis in the central part of the Maritime Territory. Trudy VladIEMG no.2:27-32 '62. (MIRA 18:3)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.

[illegible], L.I.

Comparative evaluation of blood preserv[illegible] and sodium citrate. Probl. gemat. i perel. krovi 9 no.10: 46-47 O '64. (MIRA 18:3)

1. Otdel konservirovaniya krovi Kiyevskogo nauchno-issledovatel'skogo instituta pereliyaniya krovi (nauchnyy rukovoditel' - prof. A.G. Karavanov, dir. - dotsent S.S. Yavrik).

KARABANOVA, L.T.

Standardization at the Exhibition of Achievements of the National Economy of the U.S.S.R. Standartizatsiia 25 no. 5:57-58 My '61. (MIRA 14:5)
(Moscow--Exhibitions) (Standardization)

RASKATOV, V.M., inzh.; KOKHTEV, A.A.; LELYANOV, V.A.; BESSONOVA, N.F.; VEIG, D.A.; KARABANOVA, L.T.; SILANT'YEV, M.G.; SITNICHENKO, A.I.[deceased]; CHYENKOV, V.S.; YARKOV, A.M., inzh., retsensent; GARANKINA, S.P., red.izd-va; TIKHANOV, A.Ya., tekhn. red.

[Brief handbook on materials used in the machinery industry] Kratkii spravochnik po mashinostroitel'nym materialam. Pod obshchey red. V.M.Raskatova. Moskva, Moskgiz, 1963. 440 p. (MIRA 16:7)

(Materials)

KARABANOVA, L.T., inzh.

Standardization in the machinery industry at the Exhibition of the Achievements of the National Economy. Vest.mash. 41 no.11:84-85 N '61. (MIRA 14:11)
(Moscow--Exhibitions)
(Standards, Engineering)

KARABANOVA, L.T.

Awards for standardization work. Standartizatsiia 26 no.8:58-59 Ag '62. (MIRA 15:8)

(Standardization)

KARABANOVA, L.V.

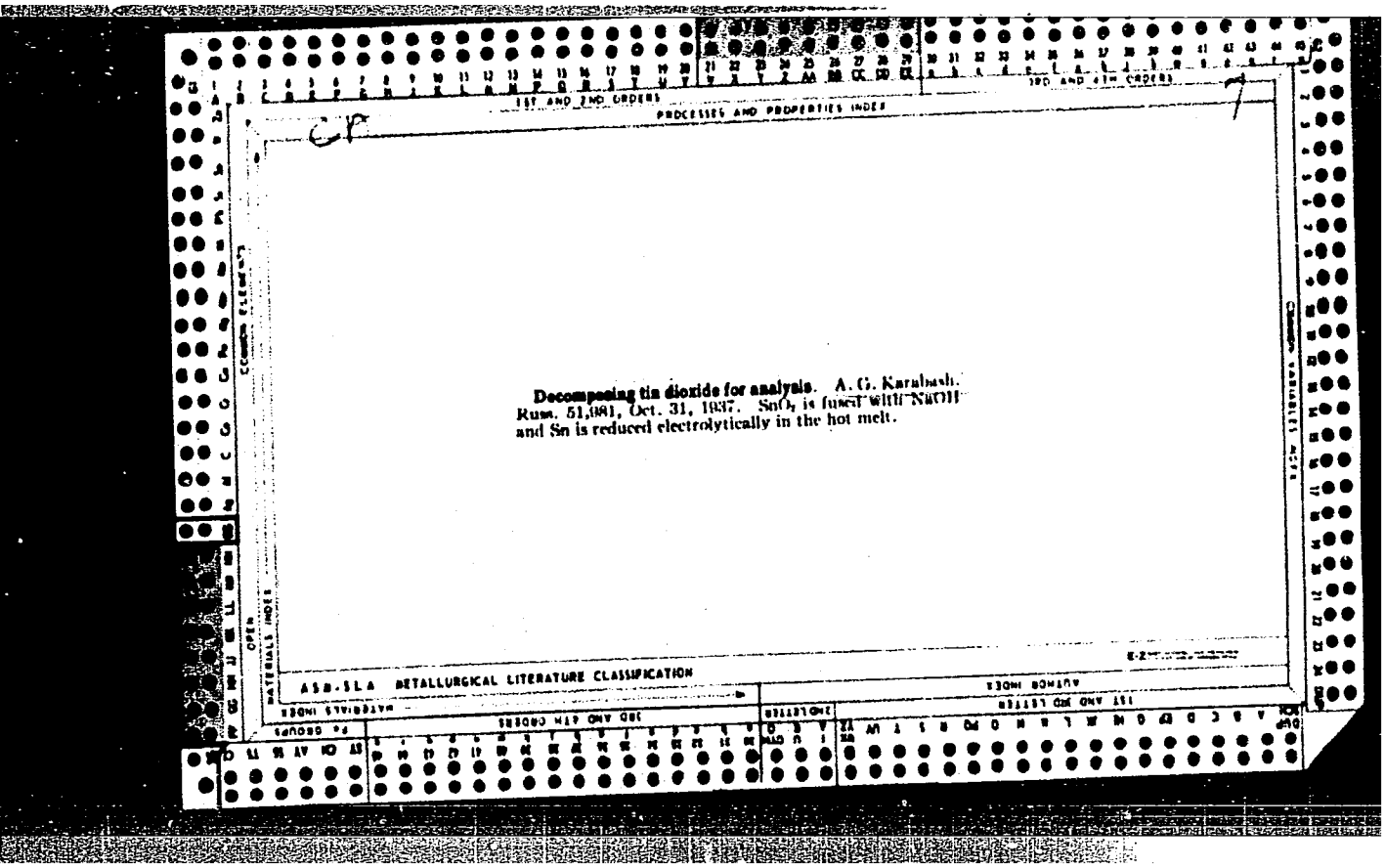
Diurnal variation of the components of the heat balance of the evaporation basin and Lake Sevan. Trudy GGO no.95:77-79 '63.
(MIRA 16:7)

(Sevan, Lake--Water--Thermal properties)

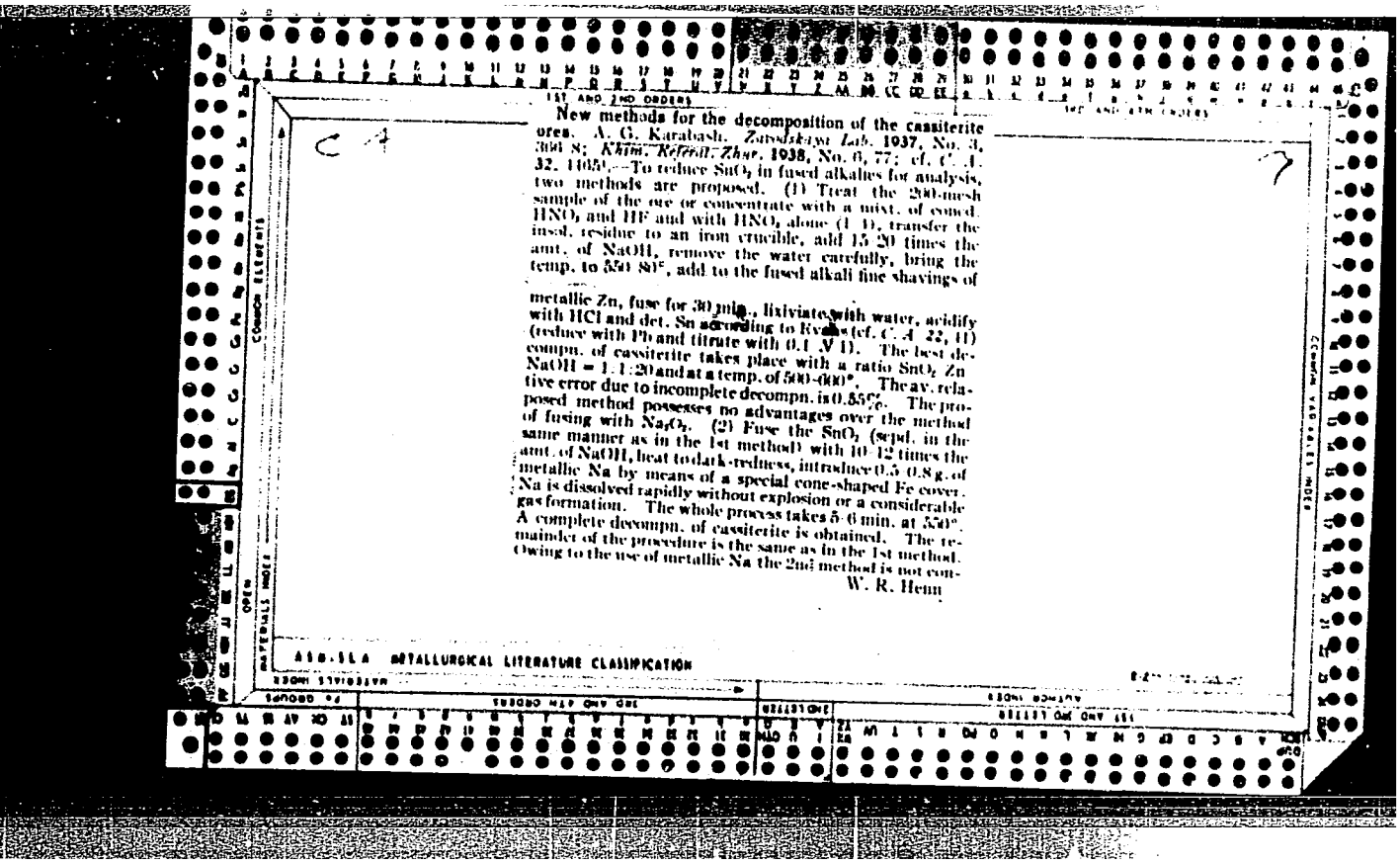
KARABANOVA, V.P.

Spectral analysis of a chromium-iron ore. Zav. lab. 27 no.7:852-854 '61. (MIRA 14:7)

1. Irkutskiy zavod tyazhelogo mashinostroyeniya imeni V.V.Kuybysheva.
(Iron ores--Spectra)



Decomposing tin dioxide for analysis. A. G. Karabash. Russ. 51,081, Oct. 31, 1937. SnO_2 is fused with NaOH and Sn is reduced electrolytically in the hot melt.



New methods for the decomposition of the cassiterite ores. A. G. Karabash. *Zavodskaya Lab.* **1937**, No. 3, 300-8; *Khim. Referat. Zhur.* **1938**, No. 6, 77; cf. *C. A.* 32, 1605⁹.—To reduce SnO_2 in fused alkalies for analysis, two methods are proposed. (1) Treat the 200-mesh sample of the ore or concentrate with a mixt. of concd. HNO_3 and HF and with HNO_3 alone (1:1), transfer the insol. residue to an iron crucible, add 15-20 times the amt. of NaOH, remove the water carefully, bring the temp. to 550-80°, add to the fused alkali fine shavings of metallic Zn, fuse for 30 min., lixiviate with water, acidify with HCl and det. Sn according to Evans (cf. *C. A.* 32, 11) (reduce with Pb and titrate with 0.1 *N* I_2). The best decompn. of cassiterite takes place with a ratio SnO_2:Zn:NaOH = 1:1:20 and at a temp. of 500-600°. The av. relative error due to incomplete decompn. is 0.55%. The proposed method possesses no advantages over the method of fusing with Na_2O_2. (2) Fuse the SnO_2 (sepd. in the same manner as in the 1st method) with 10-12 times the amt. of NaOH, heat to dark-redness, introduce 0.5-0.8 g. of metallic Na by means of a special cone-shaped Fe cover. Na is dissolved rapidly without explosion or a considerable gas formation. The whole process takes 5-6 min. at 550°. A complete decompn. of cassiterite is obtained. The remainder of the procedure is the same as in the 1st method. Owing to the use of metallic Na the 2nd method is not con-

W. R. Henn

1ST AND 2ND ORDERS | 3RD AND 4TH ORDERS

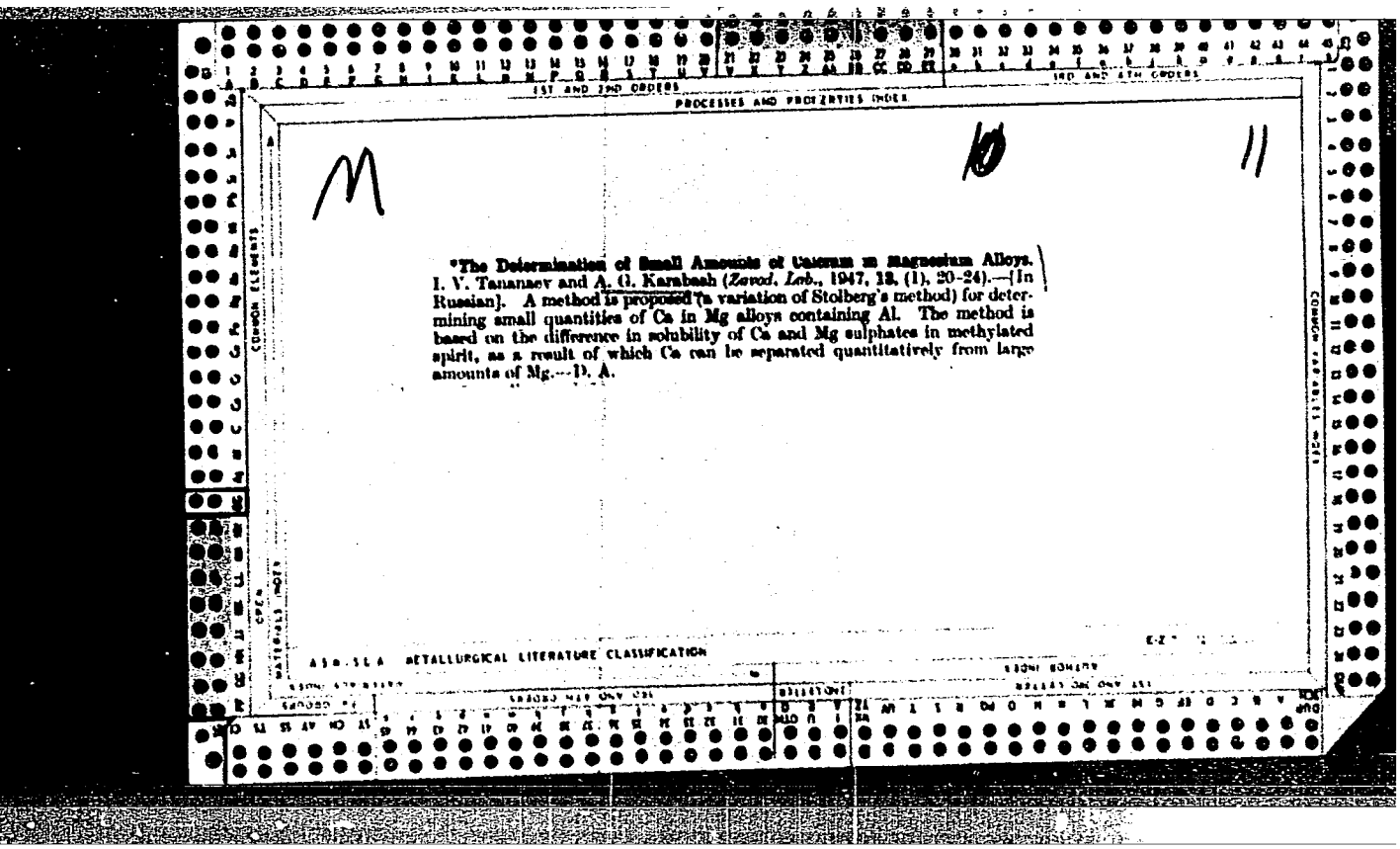
PROCESSES AND PROPERTIES INDEX

BC

B-I-7

Catalytic decomposition of cassiterite-containing tin ores by cathodal reduction. A. G. KARABASCH (Zavod. Lab., 1938, 7, 159—161).—The ore is fused with NaOH in an Fe crucible (cathode) at 500—550°, and the melt electrolysed (c.d. at cathode 0·15—0·25 amp./sq. cm., at 2·5 v.); the Sn separating dissolves in the NaOH with evolution of H_2, which reduces further amounts of SnO_2. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



"The Determination of Small Amounts of Uranium in Magnesium Alloys. I. V. Tananaev and A. G. Karabash (*Zavod. Lab.*, 1947, 13, (1), 20-24).—[In Russian]. A method is proposed (a variation of Stolberg's method) for determining small quantities of Ca in Mg alloys containing Al. The method is based on the difference in solubility of Ca and Mg sulphates in methylated spirit, as a result of which Ca can be separated quantitatively from large amounts of Mg.—D. A.

Karabash, A. G.

Use of dithizone as extraction indicator. A. G. Karabash (J. Anal. Chem., U.S.S.R., 1953, 8, 140–145).—Titrations are based on reactions involving metal dithizone complexes. The aq. solution together with 1/20th or 1/10th its vol. of ≃ 0·0001 or 0·00005 M dithizone in carbon tetrachloride, chloroform, or benzene is titrated under intermittent shaking with a suitable solution until a definite colour change appears in the organic solvent layer. Towards the end of the titration each addition is followed by shaking for 5 to 10 sec. The end-point is indicated when a colour change produced does not disappear in 30 sec. shaking and the colour remains unchanged on addition of 1 to 2 drops of the indicator solution. Examples are—titration of $Ag^{\cdot}$ in 1·0 to 9·0 N H_2SO_4 with KI giving an end-point accurate to 0·01 ml of 0·002 M KI, titration of $Ag^{\cdot}$ with 0·01 N KBr in 4 N H_2SO_4, and similarly with 0·01 N KCNS at a H_2SO_4 concn. of 3·5 N, titration of I′, Br′, and CNS′ with $Ag^{\cdot}$ under the above-mentioned conditions; determination of Cl′ by addition of $AgNO_3$, filtration, and titration of excess $Ag^{\cdot}$ by means of KI; determination of CN′ (a) by titration in weakly alkaline solution, 0·3 to 0·6 N aq. NH_3 or 0·1 to 0·2 N NaOH, with $AgNO_3$ in presence of 0·01 per cent. dithizone solution in carbon tetrachloride, or (b) use of Pb dithizonate, the solution in 0·3 to 0·6 N aq. NH_3 being treated with a drop of 0·025 M $Pb(NO_3)_2$ and 1 to 2 ml of 0·01 per cent. dithizone and titrated with $AgNO_3$, the end-point being sensitive to 0·01 to 0·02 ml of 0·025 N $AgNO_3$; determination of $Hg^{\cdot\cdot}$ in (1 + 3) H_2SO_4 by titration with 0·02 to 0·002 M KI; determination of $Au^{\cdot\cdot\cdot}$ in 0·5 to 1·0 N HCl saturated with NaCl or KCl with 0·01 to 0·002 N Na thiosulphate; determination of heavy metals by titration with Na_2S (a) titration of $Pb^{\cdot\cdot}$ and $Cd^{\cdot\cdot}$ in H_3BO_3 solution by means of 0·01–0·005 M Na_2S in presence of dithizone in benzene (b) titration of $Bi^{\cdot\cdot\cdot}$ in $NaHCO_3$ solution with 0·005 M Na_2S in presence of dithizone in benzene or carbon tetrachloride, (c) titration of $Hg^{\cdot\cdot}$ and $Ag^{\cdot}$ in dil. H_2SO_4 solution, determination of S″ by titration with a heavy metal salt under similar conditions.

G. S. Smith

KARABASH, A. G.

USSR

Volumetric determination of nickel and palladium by dotation titration with dimethylglyoxime solution. A. G. Karabash. *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 5(8), 229-93(1954).--Ni and Pd are detd. by titration with an alc. dimethylglyoxime (I) soln. in the presence of CCl_4 or $CHCl_3$. The method can be used for analysis of steel and Mn-Ni alloys. For Ni detn. in a soln. contg. no interfering elements, Ni concn. should not be >0.5 mg./ml.; the soln. should be slightly alk. After addn. of 2-5 ml. CCl_4 the soln. is titrated at room temp. with 0.03 or 0.1*M* I soln. standardized against a known Ni soln. When the CCl_4 is satd. with Ni dimethylglyoximate (II) the CCl_4 layer is removed and fresh CCl_4 added. When it is difficult to see the formation of II in the aq. layer, the CCl_4 is removed, 1-2 ml. fresh CCl_4 added, and the II extd. The color of the CCl_4 is noted. Titration is continued (with fresh CCl_4 present before each addn. of I) until the CCl_4 is colorless after 1 min. of shaking. The first drop of I soln., which does not color the CCl_4, is considered as 1 drop beyond the end point and not counted in the vol. consumed. The amt. of alc. introduced by I soln. should not be >1/5 of the aq. layer. Aq. soln. must remain alk., preferably at pH 8. Error was ±0.03 mg. Ni. For steel analysis a 0.5-g. sample (0.002-0.08 g. Ni) is dissolved in a

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covered 250-ml. beaker with 50 ml. 6*N* HCl. Five ml. 7.5*N* HNO_3 is added in small portions. The soln. is boiled to remove N oxides. To the cold soln. is added 20% NH_3 soln. to neutralize most of the acid but not enough to ppt. $Pe(OH)_3$. To the cold soln., with stirring, is added 4.5 g. $NaHF_2$. The soln. is made alk. to litmus with 10% NH_3 soln. and after 3–5 min. decanted into a 150-ml. volumetric flask. The ppt. in the beaker is dissolved in 10 ml. 6*N* HCl, treated with 1 g. $NaHF_2$, and neutralized as before. Ppt. and soln. are added to the previously decanted soln. A 50–75 ml. aliquot of clear soln. is titrated as above. For Pd detn. an aliquot contg. 1–50 mg. Pd and no Au or Pt^{++} is used. A small amt. of Pt^{++} is permissible. Acidity should be <0.2*N* in HCl or H_2SO_4. After addn. of 1–5 ml. $CHCl_3$, the sample is titrated with I soln. standardized against a known Pd soln. as in the Ni detn. Error was ±0.00 mg.

[illegible] Ruth Mayerle

KARABASH, A.G.

24(7) **PHASE I BOOK EXPLOITATION** SOV/1700

L'vov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) /L'vov/ Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

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Materials of the 10th All-Union Conference (Cont.) SOV/1700

Karabash, A.G., Sh.I. Peyzulayev, R.L. Slyusareva, M.F. Sotnikova, M.I. Smirnova-Averina, Z.N. Sansonova, L.S. Kraus, G.G. Morozova, L.S. Romanovich, I.I. Smirenkina, V.M. Lipatova, S.K. Sazanova, L.I. Pogacheva, V.F. Haacheva, Ye.F. Voronova, P.D. Gorbachev, F.A. Kostareva, N.T. Kostereva, A.I. Yeloratskaya, and N.N. Kuznetsova. Methods of Spectrochemical Analysis of Pure Metal for Impurities 556

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KAKABASH, A.G.

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Nechetnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Prolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alikhanov, A.I., Bochkarev, V.V., Lebedinskiy, A.I., Malkov, I.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

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KARABASH, A.G.; PEYZULAYEV, Sh.I.; SLYUSARENVA, R.L.; SOTNIKOVA, N.P.; SHIRIOVA-AVERINA, N.I.; SAMSONOVA, Z.N.; KRAUZ, L.S.; MOROZOVA, G.G.; ROMANOVICH, L.S.; SMIRENKINA, I.I.; LIPATOVA, V.M.; SAZANOVA, S.K.; PUGACHEVA, L.I.; USACHEVA, V.P.; VORONOVA, Ye.F.; GORBACHEV, P.D.; KOSTAREVA, F.A.; KOSTEREVA, N.T.; YELOVATSKAYA, A.I.; KUZNETSOVA, N.N.

Spectrochemical analysis of pure metals for impurities. Fiz. sbor. no.4:556-562 '58. (MIRA 12:5)
(Spectrochemistry)

78-3-4-27/38

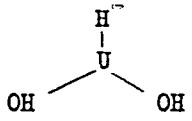
AUTHOR: Karabash, A. G.

TITLE: Some Chemical Properties of Thorium and Uranium (O nekotorykh khimicheskikh svoystvakh toriya i urana)

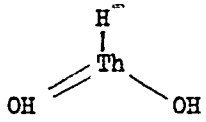
PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 4, pp. 986-995 (USSR)

ABSTRACT: In the treatment of the metals thorium and uranium with hydrochloric acid the insoluble radical represents chemical compounds which are complicated hydrides. The determination of the chemical composition of these hydrides is as follows:

for uranium hydride:



for thorium hydride:



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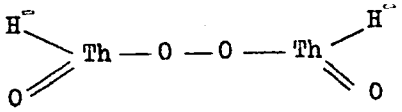
Some Chemical Properties of Thorium and Uranium

The complicated process of the interaction between thorium and hydrochloric acid takes place according to the following equation: $2\ Th + 4\ HCl + 2\ H_2O = ThCl_4 + ThH^{\cdot\cdot}(OH)H + 6H$. The interaction between uranium and hydrochloric acid, however, takes place as follows: $2\ U + 4\ HCl + 2\ H_2O = UCl_4 + UH^{\cdot\cdot}(OH)_2 + 5H$.

On the action of oxidizing agents as hydrogen peroxide, atmospheric oxygen, concentrated nitric acid or aqua regia the hydride of thorium passes over to a light-yellow substance which corresponds to the composition of a peroxyhydride of the following formula:



This compound contains, independently of the conditions of its production, still the chlorine ion or NO_3-ion. Exposed to air it crystallizes with crystal water.

The chemical and physical properties of the complicated hydride-hydroxyhydrides were determined. The hydrides of thorium and uranium have similar properties as the simple hydrides. These

Some Chemical Properties of Thorium and Uranium

complicated hydrides and oxyhydrides belong to the general class of oxy- and hydroxy-halide compounds of metals. There are 4 tables and 15 references, 2 of which are Soviet.

SUBMITTED: September 30, 1957

Card 3/3

AUTHORS: Peyzulayev, Sh.I., Karabash, A.G., Krauz, L.S., Kostareva, F.A., Smirnova-Averina, N.I., Babina, F.L., Kondrat'yeva, L.I., Voronova, Ye.F., Meshkova, V.M. 32-24-6-19/44

TITLE: Spectral Methods for the Determination of Admixture Traces (Spektral'nyye metody opredeleniya sledov primesey), I. Chemical Spectral Methods of Analyzing Strontium, Chromium, and Silicon (I. Khimiko-spektral'nyye metody analiza strontsiya, khroma i kremniya), II. The Quantitative Spectral Analysis of Water and Microsamples on the Basis of Strontium Nitrate (II. Kolichestvennyy spektral'nyy analiz vody i mikroobraztsov na osnove nitrata strontsiya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 6, pp 723-731 (USSR)

ABSTRACT: In the course of the present work analysis methods are investigated in which sensitivity is increased by previous enrichment and which make it possible to determine a larger number of admixtures. From the analysis of strontium, which is described in detail, it follows that determination is based upon a formation of strontium sulfate and that 18 elements can be determined by means of one

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Spectral Methods for the Determination of Admixture Traces. I. Chemical Spectral Methods of Analyzing Strontium, Chromium, and Silicon. II. The Quantitative Spectral Analysis of Water and Microsamples on the Basis of Strontium Nitrate

32-24-6-19/44

spectrogram, in which case sodium is determined separately. Analysis sensitivity is shown by a table, and the preparation of samples and the spectral analysis itself are described. From the data concerning the determination of chromium it follows e.g., that chromium is volatilized in form of CrO_2Cl_2, that practically complete (99.7%) volatilization is attained at 200-220°, and that at the same time only arsenic, boron, germanium, tin, and mercury are removed. In the case of a low content of admixtures analysis was carried out already after the first concentration, whereas in the case of a higher percentage (10^{-1} - 10^{-2}%) also the second concentrate was examined. The analysis is described. The analysis of silicon is based upon its volatilization in form of fluorides; also in this case the concentrate of the admixtures is produced on the basis of a spectrally pure strontium sulfate, and also in this case 18 elements can be determined simultaneously by means of one spectrogram, sodium being determined separately. The process of analysis is described, and it is said, among other things, that the method was worked out in 1955 for the

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Spectral Methods for the Determination of Admixture Traces. I. Chemical Spectral Methods of Analysing Strontium, Chromium, and Silicon. II. The Quantitative Spectral Analysis of Water and Microsamples on the Basis of Strontium Nitrate

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determination of elementary silicon.
II. The method is based upon application of the sample solution on to spectrally pure strontium nitrate powder, drying, and spectral analysis; it is possible, on the one hand, to examine the organic impurities existing in water, and, on the other, to analyze the composition of various microsamples. In the analysis of water it is possible to determine 12 elements by means of one spectrogram, including the ordinary admixtures found in water as well as corrosion products. The process of analysis is described as well as the manner in which etalons and the spectrally pure strontium nitrate are prepared. By the method described it is possible to determine 26 elements by the analysis of microsamples. Analysis is described, and it is said, among other things, that the relative sensitivity in determining components and admixtures depends on the weighed in portion of the microsample and the strontium nitrate; corresponding data are given by a table. By comparative determinations carried out on a strontium nitrate-

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Spectral Methods for the Determination of Admixture Traces. I. Chemical Spectral Methods of Analyzing Strontium, Chromium, and Silicon. II. The Quantitative Spectral Analysis of Water and Microsamples on the Basis of Strontium Nitrate

32-24-6-19/44

and beryllium oxide basis the fact was established that both varieties of the method work with a relative error of ± 15-20%, and that frequently a weighed portion of 0.1-50 mg is sufficient. There are 2 figures, 6 tables, and 14 references, 6 of which are Soviet.

1. Spectrum analyzers--Performance 2. Minerals--Analysis 3. Minerals--Determination 4. Water--Impurities 5. Water --Spectra 6. Strontium nitrate spectrum--Applications

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5(2), 5(4)

AUTHORS: Karabash, A. G., Peyzulayev, Sh. I., Slyusareva, R. L., Lipatova, V. M.

SOV/75-14-1-19/32

TITLE: A Chemico-Spectrographic Method for the Analysis of Metallic Beryllium and Beryllium Oxide of High Purity (Khimiko-spektral'nyy metod analiza metallicheskogo berilliya i okisi berilliya vysokoy chistoty)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 1, pp 94-99 (USSR)

ABSTRACT: The spectrochemical method described in the present paper permits the simultaneous determination of the following 24 impurities in metallic beryllium and beryllium oxide: Mg, Ca, Ba, Al, Ti, V, Cr, Mo, Mn, Fe, Co, Ni, Cu, Ag, Zn, Cd, Se, Pb, Sb, Bi, Ga, In, Tl, Te. The determination of Na was carried out separately in a glass spectrograph. For the enrichment of admixtures beryllium was extracted in form of its basic acetate $Be_4O(CH_3COO)_6$ with chloroform. This basic beryllium compound is satisfactorily resistant against the action of many organic reagents (water, hydrochloric acid) and easily soluble in organic solvents. Solubility in chloroform amounts

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to 50g in 100 ml $CHCl_3$, whereas the acetates of the admixtures to be determined are practically insoluble in chloroform. The chloroform extract is three times washed with hydrochloric acid, and the admixtures, together with a small quantity of Be ($\sim$1/20 of the initial quantity) pass quantitatively into the solution of hydrochloric acid. In this way the admixtures are enriched 20 - 25-fold. By this enrichment the sensitivity of admixture determination is increased from 10^{-3} - 10^{-4}% (without enrichment) to 10^{-4} - 10^{-5}%. The lines used for the spectral-analytical determination of the 24 admixtures and of sodium are shown in a table. The main quantity in the concentrate is Be_2O_3. By means of a special process, which is described in detail in this paper, the authors conveyed the beryllium oxide into a glass-like modification (hexagonal crystal lattice of the Wurtzite type), which differs from normal Be_2O_3 by its much smaller crystals. This modification permits an increase of the weighed in portion and thus also an increase of the sensitivity of determination. The corresponding investigations of X-ray structure were carried out

A Chemico-Spectrographic Method for the Analysis of Metallic Beryllium and Beryllium Oxide of High Purity

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by Ye. S. Makarov. The exactness and reproducibility of the elaborated method was tested on the basis of 25 artificial mixtures, and also by comparison with results obtained by chemical methods of determination. The relative error of determination (arithmetic mean) amounts to ± 20%, only at the sensitivity limit of the method the error attains values of 50 - 100%. Errors occur particularly in connection with the determination of cadmium. The method may be used for the analytical control of beryllium of a high degree of purity. Also a method for the spectroanalytical determination of samples without enrichment of admixtures was worked out which may serve for the control of technical products (accuracy 10^{-3} - 10^{-4}%). Carrying out of both kinds of determination is very accurately described in the paper. There are 2 figures, 2 tables, and 18 references, 3 of which are Soviet.

SUBMITTED: October 28, 1957

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28(5) 05759

AUTHORS: Konovalov, E. Ye., Matyukhin, V. V., Yemel'yanov, V. P., Karabash, A. G. SOV/32-25-10-48/63

TITLE: A Conductometric Signaler for Oxygen in Gases

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1260-1262 (USSR)

ABSTRACT: A device was constructed (E. Ye. Konovalov, Ye. A. Kochetkova, V. M. Morozov, V. D. Kolesnikov, V. M. Andreyev, A. G. Karabash - Patent No 1113837), which is intended to be used for the continuous control of the oxygen content in noble gases. It makes it possible to determine the moment at which the oxygen absorber becomes saturated and prevents pollution of the system with oxygen-containing gas. The transmitter of the device (Fig 1) is a porcelain tube filled with coppered silica gel. A porcelain rod is introduced into the tube round which a chrome nickel coil with resistivity of 500 Ohm is wound. The tube itself is in a steel casing. The working piece of the transmitter is heated by means of an electric furnace to 300 to 350°. The gas to be controlled flows through the porcelain tube by way of the "coppered" silica gel. If the gas contains oxygen, the latter oxidizes the copper, thus

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KARABASH, A.G.

PHASE I BOOK EXPLOITATION SOV/4443

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Metody opredeleniya primesey v chistykh metallakh (Methods of Determining Admixtures In Pure Metals) Moscow, 1960. 411 p. (Series: Its: Trudy, 12) 3,500 copies printed.

Resp. Eds.: A.P. Vinogradov, Academician, and D.I. Ryabchikov, Doctor of Chemical Sciences; Ed. of Publishing House: M.P. Volynets; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for chemists, metallurgists, and engineers.

COVERAGE: The articles describe methods for detecting and determining various admixtures and their traces in pure metals. Also discussed are many chemical, physicochemical, electrochemical, spectrochemical and luminescence methods of analyzing materials of high purity. The editors state that these methods have been developed within the last five or six years by various Soviet scientific institutes, and are now widely used in research and factory laboratories of the Soviet Union. No personalities are mentioned. References, mostly Soviet, accompany each article.

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