ABATUROV, A.I.; VINOGRADOV, M.A.; DUBROVA, G.B.; LOTOREV, L.M.; ZORIN, S.N.; VASIL'YEV, A.A.; VOLOKITIN, A.S.; BUKOVETSKIY, A.I.; PEMAZKOV, N.S.; MEZENTSEV, P.V.; YEGORKIN, N.I.; DANILOV, M.M.; LUKASHEV, M.Ya.; MEYEROVICH, I.L.; KLYUCHEV, A.Ye.; SARYCHEV, V.G.; ZAVILOVICH, M.A.; NOVOSEL'SKIY, N.M.; GITLITS, S.A.; REZNICHENKO, M.S.; MOROZ, L.P.; KHETAGUROVA, F.V.; CHOGOVADZE, Sh.K.; RYBCHENKO, A.A.; BOCHAROVA, N.P.; GAGLOYEVA, N.A.; KHYUKOVA, T.B.

Rubinshtein, Grigorii Leonidovich; 1891-1959. Sov. torg. 33 no.12:56 D '59. (MIRA 13:2)
(Rubinshtein, Grigorii Leonidovich, 1891-1959)

VINOGRADOV, M.D., inzh.; VOLOVOV, V.A., inzh.

Hydraulic wrench for assembling operations. Mekh. stroi. 17 no.10:24-25 O '60. (MIRA 13:10)
(Wrenches)

VINOGRADOV, M.D., inzh.

Efficiency promotion and invention in the Stalingrad Hydroelectric Power Station Construction Trust. Gidr. stroi. 31 no.9:48-50 S '61. (MIRA 14:12)
(Volga Hydroelectric Power Station (22d Congress of the CPSU))

VINOGRADOV, M. E. (Moscow)

"On the Vertical Distribution of Deep-Sea Plankton in the West Part of the Pacific Ocean"

Soviet paper presented at the 15th Intl. Congress of Zoology, London, 16-23 Jul 58

VINOGRADOV, M. E. (Moscow)

"On the Vertical Distribution of Deep Sea Plankton in the West Part of the Pacific Ocean."

paper presented at XVth International Congress of Zoology, London, 16 - 23 Jul 1958.

Eval: B,3112,162

KORSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, N.G.

Ring formation in beryllium polyacetaryl diacetonate solutions.
Vysokom. soed. 6 no.11:1987-1991 N '64 (MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ARTAMONOV, O.M.; BERLAGA, R.Ya.; VINOGRADOV, M.G.

Effect of ion bombardment on the electric and photoelectric properties of lead sulfide. Fiz. tver. tela 5 no.3:959-961 Mr '63. (MIRA 16:4)

1. Leningradskiy gosudarstvennyy universitet.
(Lead sulfide—Electric properties) (Photoelectricity) (Ions)

KORSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, M.G.

Coordination polymers. Part 19: Exchange reactions in the polycondensation process. Vysokom. soed. 6 no.4:729-733 Ap '64. (MIRA 17:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ACCESSION NR: AP4032574 S/0190/64/006/004/0729/0733

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.

TITLE: Studies in coordination polymers. 19. Exchange reactions in the polycoordination process

SOURCE: Vysokomolek. soyedin., v. 6, no. 4, 1964, 729-733

TOPIC TAGS: coordination polymer, polycoordination process, acetoacetyl diphenyloxide, beryllium acetylacetonate, polycoordination exchange reaction, Huggins equation, Huggins constant, high molecular fraction, low molecular fraction

ABSTRACT: In order to study the exchange reactions it was necessary to produce polymer fractions differing considerably in molecular weight. This was achieved by fractionating a polymer synthesized from 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetonate in solution, at 160C, in vacuum, as described in an earlier paper by the authors (Vysokomolek. soyed., 5, 1771, 1964). The fractionation of the polymer was conducted by methanol precipitation from a 1% dimethylformamide solution. Fourteen fractions were isolated, and the specific viscosities of these and of the nonfractionated polymers were determined in 0.5% dimethylform-

Card 1/2

ACCESSION NR: AP4032574

amide solutions. Values of 0.30-0.80 were obtained. They matched closely the 0.31-0.80 range for specific viscosities calculated by the Huggins equation. The study of the exchange reactions taking place during the polycondensation process was conducted on a mixture of high-molecular fraction of the polymer with a low-molecular fraction. The latter polymer was obtained under conditions of excess beryllium acetylacetonate and contained no terminal free enolic groups. The experiment was conducted in a 25% dimethylformamide solution. The viscosity of the mixture of the two fractions was determined after heating the mixture to 100C for periods up to 10 hours. It was found that the molecules of the polymer interacted at a rate of approximately the same order of magnitude as the rate of their growth from the issuing materials. It is concluded that the reaction of polycoordination of 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetonate is a process of balanced polycondensation. Orig. art. has: 3 charts, 1 table, and 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 28May63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 001

Card 2/2

KORSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, M.G.

New method for the production of macrocyclic compounds from linear polymers. Dokl. AN SSSR 155 no.6:1354-1356 Ap '64. (MIRA 17:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2/ Chlen-korrespondent AN SSSR (for Korshak).

L 20740-66 EEC(k)-2/EWA(h)/EWT(l)/EWT(m)/T/EWP(t) IJP(c) JD

ACC NR: AP6007539 SOURCE CODE: UR/0410/65/000/006/0036/0044

AUTHOR: Vinogradov, M. G. (Novosibirsk); Mikhaylovskiy, I. P. (Novosibirsk); Konyeyev, S. T. (Novosibirsk); Kostsov, E. G. (Novosibirsk)

ORG: none

TITLE: Prospects for using thin-film diodes in measuring instruments

SOURCE: Avtometriya, no. 6, 1965, 36-44

TOPIC TAGS: semiconductor diode, thin film diode, measuring instrument

ABSTRACT: Three types of thin-film diodes are in use: (1) Diodes with space-charge-limited current; (2) Diodes with oxide films whose functioning depends on metal-oxide-boundary phenomena; (3) Heterojunction diodes. Their prinicpal characteristics and the physical phenomena transpiring in them are discussed. The results of an experimental investigation of the second and third types with 0.01 and 0.0003 cm^2 active surface (9 diodes per cm^2) are reported. Current-voltage characteristics of Ti-oxide-film diodes are shown; these diodes can operate at temperatures up to 200C; their characteristics do not deteriorate with time (2.5 yrs). CdS heterojunction diodes exhibit very steep characteristics; at 0.2-0.4 v, their forward currents are considerable; at -3-4 v, their reverse currents are 10-40 microamp. At temperatures over 100C, their reverse current rapidly increases. After 100 hrs of continuous operation, the forward current (initially 2 ma) increased by

Card 1/2 UDC: 681.20+621.382

L 20740-66

ACC NR: AP6007539

200—300%. Both tested types are recommended for use in measuring instruments where the measuring of very low (20 mv) voltages, high frequencies, and elevated ambient temperatures are involved. Orig. art. has: 6 figures. [03]

SUB CODE: 09/ SUBM DATE: 24Aug65/ ORIG REF: 005/ OTH REF: 007/ ATD PRESS: 4214

Card 2/2

VINOGRADOV, M.G.; VINOGRADOVA, S.V.; DAVIDOVICH, Yu.A.; KORSHAK, V.V.

Coordination polymers. Report No.19: Properties of an inner-complex beryllium-containing polymer based on 4,4'-bis (acetoacetyl) diphenyl oxide. Izv. AN SSSR. Ser. khim. no.11: 2023-2027 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

VINOGRADOVA, S.V.; VINOGRADOV, M.G.; KORSHAK, V.V.

Kinetics of polycoordination. Kin. i kat. 5 no.2:247-252 Mr-Ap '64. (MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KORSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, M.G.

Coordination polymers. Part 17: On various factors influencing the polycoordination process. Vysokom. soed. 5 no.12:1771-1775 D '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

VINOGRADOV, M.G.

AID Nr. 957-11 2 May

EFFECT OF ION BOMBARDMENT ON THE ELECTRIC AND PHOTOELECTRIC PROPERTIES OF LEAD SULFIDE (USSR)

Artamonov, O. M., R. Ya. Berlaga, and M. G. Vinogradov. Fizika tverdogo tela, v. 5, no. 3, Mar 1963, 959-961. S/181/63/005/003/044/046

Variations in the conductivity, photoconductivity, and thermal emf of surface PbS layers have been measured during ion bombardment. Ion-bombardment energy was of the order of 100 to 400 ev, and the ion current was 10^{-6} to 10^{-8} amp. Layer conductivity was measured with a high-range ohmmeter. Photoconductivity was measured at modulated illumination with the use of a tuned amplifier. The dimensions of the layers were 0.5 x 1.0 cm. Measurements of a layer ~0.6 μ thick during argon ion bombardment showed by thermal-emf sign that the layers had hole conductivity. With the passage of the layer-resistance—bombardment-time curve through the first maximum the sign changed and the layers acquired electron conductivity. In the falling sector of the curve

Card 1/2

AID Nr. 957-11 2 May

EFFECT OF ION [Cont'd] S/181/63/005/003/044/046

resistance showed a hyperbolic dependence on time. Following bombardment for ~ 10 min, the resistance decreased and remained unchanged during an additional 10 hours of bombardment. With the removal of the ion beam the resistance increased. The reversibility of the processes causing variations in layer conductivity were found to depend on ion-bombardment time: during short exposures the process is to a large degree reversible, whereas after a long bombardment the original properties could be restored only following annealing in the open air. With the application of the ion beam, photoconductivity sharply decreases and after a long exposure disappears completely; it can be restored only after repeated heating in the open air. Bombardment by ions of various gases (hydrogen, oxygen, argon) made no qualitative difference. [DW]

Card 2/2

ACCESSION NR: AP4007975 S/0190/63/005/012/1771/1775

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.

TITLE: Study of coordination polymers. Report 17. Effect of different factors on the polycoordination process

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 12, 1963, 1771-1775

TOPIC TAGS: chelate polymer, coordination polymer, polycoordination, diphenyloxide. 4.4'-bis(acetoacetyl)-, beryllium acetylacetonate, beryllium chelate polymer, metal chelate polymer, inner complex, inner complex polymer

ABSTRACT: The influence of various factors such as solvent species, temperature, time-duration of reaction, the concentration and proportion of the initial substances, as well as of additives, upon the polycoordination process of 4.4'-bis-(acetoacetyl) diphenyloxide and beryllium acetylacetonate in solution has been investigated. Reduced viscosity versus temperature curves in a range 160-240C for a solution of beryllium in dimethylformamide are given. At 250C a viscosity curve is obtained for the same solution as a function of polycoordination duration between 2 to 10 hours. A small excess of beryllium acetylacetonate is shown to

Card 1/2

ACCESSION NR: AP4007975

lower the molecular weight of the polymer. It is concluded that polymers of rather high molecular weight can be prepared at relatively low temperatures by polycoordination of the reactants in solution under vacuum and by subsequent heating of the solid polymer at a higher temperature. Orig. art. has: 4 figures and 4 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds AN SSSR)

SUBMITTED: 01Mar62 DATE ACQ: 20Jan64 ENCL: 00

SUB CODE: CH, MA NO REF SOV: 004 OTHER: 000

KORSHAK, V.V.; ROGOZHIN, S.V.; VINOGRADOV, M.G.

Phthalocyanine polymers of diphthalyl ketone. Izv.AN SSSR.Otd.khim. nauk no.8:1473-1475 Ag '62. (MIRA 15:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Ketone) (Phthalocyanine)

L 21209-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/Pe-4
IJP(c)/RPL JD/WW/JG/RM S/0190/64/006/012/2149/2154
ACCESSION NR: AP5001479

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.; Davidovich, Yu. A.

TITLE: Studies in the field of coordination polymers. 22. The reversible decomposition of polymeric beryllium complexes with bis (beta-diketones) in solution

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 12, 1964, 2149-2154

TOPIC TAGS: coordination polymer, beryllium complex, heteroorganic compound, diketone polymer, heteroorganic polymer, polymer degradation, cyclic oligomer

ABSTRACT: Polymeric beryllium intracomplexes with 4,4'-bis-(acetoacetyl)diphenyloxide and with symmetrical 4,4'-bis-(acetoacetyl)diphenylethane were prepared by a published method and shown to decompose readily in heated dilute solutions in various organic solvents, yielding low molecular weight oligomers and reforming the original polymeric complex in concentrated solutions or recovered solids at higher temperatures. The polymers were heated to 50-350C under nitrogen in 0.5-50% solutions in chlorobenzene, biphenyl, dimethylformamide, acetophenone, anisole, chloroform or tetrachloroethane. The changes in viscosity indicated a temperature dependence of the equilibrium for the reversible decomposition. A similar thermal behavior had been observed with solutions of beryllium polysebacyldiacetonate (Vysokomolekulyarnyye soyedinineniya v. 6, 729, 1964). A generalized scheme for

Card 1/2

L 21209-65
ACCESSION NR: AP5001479

the reversible formation of cyclic oligomers from intracomplex beryllium polymers is proposed. Orig. art. has: 3 tables, 5 figures and 3 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute for Heteroorganic Compounds, AN SSSR)

SUBMITTED: 06Feb64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 001

Card 2/2

VINOGRADOV, M.P.,
DYAKOV, M.I., Izvestiya Tzentral. Nauch.-Issledovatel. Inst. Pishchevoi Vkusovoi Prom., Separate 1931, 24pp-

VINOGRADOV, M. P.
M. I. DYAKOV, Izvestiya Tzentral. Nauch.-Issledovatel. Inst. Pishchevoi Vkusovoi Prom. Separate 1931, 24 pp.

VINOGRADOV, M. T.

Science

Principles of Michurin's biology; Leningrad, Ministerstvo prosveshcheniia RSFSR, Leningradskoe otd-nie, 1950.

Monthly List of Russian Accessions, Library of Congress May 1952. Unclassified.

VINOGRADOV, M.P.; VINOGRADOVA, T.V.

Concerning criticism by N.V. Turbin and N.D. Ivanov of the new concepts of the origin of species. Bot.zhur. 38 no.2:234-245 Mr-Ap '53. (MLRA 6:6)
(Species, Origin of) (Turbin, N.V.) (Ivanov, N.D.)

Vinogradov, Mikhail Petrovich, 1891-

VINOGRADOVA, Taisa Vasil'evna, 1892- ed.

Principles of Michurin biology Leningrad, Gos. Uchebno-pedgog. izd-vo, Leningradskoe otd-nie, 1950. 518 p. (51-15430)

QH302.V5

VINOGRADOV, M.I.; KUPTSOVA, Z.V., red.; SAYTANIDI, L.D., tekhn. red.

[Safety measures in transportation operations] Tekhnika bezopasnosti na transportnykh rabotakh. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961. 13 p. (MIRA 15:3)
(Tractors--Safety measures)

VINOGRADOV, M.I.; MESHCHANKINA, A.B., red.

[Safety measures in loading and unloading work] Tekhnika bezopasnosti na pogruzochno-razgruzochnykh rabotakh. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1961. 11 p.
(MIRA 15:5)

(Loading and unloading--Safety measures)

VINOGRADOV, M.I.; PAVLOVA, L.P.; TOCHILOV, K.S.; UTKINA, N.S.

Some aspects relating to the development of theoretical principles of work physiology. Nerv. sist (Leningrad) 2 no.3:145-151 '62. (MIRA 17:7)

1. Laboratoriya fiziologii truda Fiziologicheskogo instituta imeni Ukhtomskogo Leningradskogo gosudarstvennogo universiteta.

VINOGRADOV, M.I.

Vaporization of metals in a vacuum (review). Prib.i tekh.eksp. no.4:3-13 Jl-Ag '60. (MIRA 13:8)
(Vacuum metallurgy)

VINOGRADOV, M.I. (Leningrad)

Some trends and prospects of the development of occupational physiology at the current stage. Fiziol.zhur. 50 no.1:123-126 Ja '64.

(MIRA 18:1)

USSR / Human and Animal Physiology. Norvous System, Highor Norvous Activity, Bohavior.

Abs Jour : Rof Zhur - Biol., No 15, 1958, No. 70568

Author : Vinogradov, M. I.; Tochilov, K. S.
Inst : Academy of Sciences GeorgianSSR
Titlo : The Problom of the Rockoning of Timo by tho Human Cerobral Cortox

Orig Pub : In tho collection, Probl. sovrom. fiziol. norvn. i myshochn. sistom. Tbilisi, AN GruzSSR, 1956, 293-300

Abstract : Tho oxporimontal subjects woro askod to porform dynamic (turning of a handlo) or static (holding of muscular tonsion on a Schoydin dynamograph) work during tho passago of a light across a screon, and to rost in tho absonco of tho light. Tho cyclos woro 15 soc in length (fivo soc of work, ton of rost), six soc (two of work and four of rost), and 27 soc (nino of work and 18 of rost). Thon tho

Card 1/2

USSR / Human and Animal Physiology. Nervous System, Higher Nervous Activity, Behavior. T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 70568

light was omitted and the subjects were asked to work at the same tempo. The stability of the stereotype in various experimental subjects was different, with the deviations being as high as 50 percent from the norm (most frequently seen were tendencies toward increasing the duration of the periods). In proportion to the work the stereotype became stabilized, and the periods of work were particularly precise in duration. The subjects attempted to compensate for the absence of the light signal by resorting to thought counting or by reproduction of the path of the light by movement of the eyes. The former method was the more precise. With removal of the light the muscular activity increased. With auditory signalization the reckoning of time was more precise than with visual signalization. -- M. I. Lisina

Card 2/2

VVEDENSKIY, Nikolay Yevgen'yevich; TAREYEV, F.G.; VINOGRADOV, M.I., prof., otv. red. toma; SHISHKINA, N.I., red.

[Complete collected works] Polnoe sobranie sochinenii. Leningrad, Izd-vo Leningr. univ. Vol.7. [Obituaries, articles, essays, abstracts of reports and communications, addresses at sessions of scientific societies, reviews of scientific papers; 1879-1920] Nekrologi, stat'i, ocherki, referaty dokladov i soobshchenii, vystupleniia na zasedaniiakh nauchnykh obshchestv, otzyvy o nauchnykh rabotakh; 1879-1920 gg. 1963. 192 p. (MIRA 17:7)

UKHTOMSKIY, Aleksey Alekseyevich (1875-1942), akademik; TEREKHOV, P.G.; VINOGRADOV, M.I., prof., otv. red.; PROKHOROVA, M.I., prof., red.; AYRAPET'YANTS, E.Sh., prof., red. toma; GOLIKOV, N.V., prof., red. toma; VASIL'YEV, L.L., prof., ZHUKOV, Ye.K., prof., red.; MAKAROV, P.O., prof., red.; RUDASHEVSKIY, S.Ye., dots., red.; KARPOVA, L.A., red.; VODOLAGINA, S.D., tekhn.red.

[Collected works]Sobranie sochinenii. Leningrad, Izd-vo Leningr. univ. Vol.6.[Public scientific speeches, scientific and review articles and materials on the history of Soviet and world physiology]Obshchestvenno-nauchnye vystupleniia, nauchnye i obzornye stat'i i materialy k istorii otechestvennoi i mirovoi fiziologii. 1962. 210 p. (MIRA 15:9)
(Ukhtomskii, Aleksey Alekseevich, 1875-1942) (Physiology)

SOV/120-58-2-10/37

AUTHORS: Akishin, P. A., Vinogradov, M. I., Danilov, K. D., Levina, N. P., Martinson, Ye. N., Rambidi, N. G. and Spiridonov, V. P.

TITLE: An Electronograph for Studying the Structure of Molecules of Non-Volatile Compounds (Elektronograf dlya issledovaniya stroyeniya molekul trudnoletuchikh soyedineniy)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, pp 70-74 (USSR)

ABSTRACT: One of the most widely used and effective methods of studying the geometrical structure of complex molecules is the electronographic method. The method is based on the study of the diffraction of fast electrons by the vapour of the substance under investigation. In the literature there is very little information on the geometry of the molecules of non-volatile compounds. This is due to experimental difficulties associated with such studies. Maxwell and his collaborators have described an electronograph with a high temperature evaporator which was used to study the structure of molecules of substances whose boiling points were 1200-1400°C. The present paper describes an electronograph which

An Electronograph for Studying the Structure of Molecules of Non-Volatile Compounds.

was constructed in 1954 and can be used for substances with boiling points up to 2500°C. The instrument consists of an evaporator in which the substance under investigation is vapourised by electron bombardment, an electron gun and a special "sector device". Attempts were made and are described of preventing the radiation from the evaporator from reaching the photographic plate when studies are made of the diffraction pattern produced by vapours at high temperatures. The most effective way of screening the emulsion was by covering it with a thin layer of black ink which can be washed off before developing. The electronograph described in the present paper has been used to determine the configuration and geometrical parameters of 30 molecules of non-volatile halides of elements of the second group in the periodic table, many of which have boiling points in the range 1500-2500°C. These data were given in Refs.4-11. There are 5 figures, 1 table and 11 references, of which 2

An Electronograph for Studying the Structure of Molecules of Non-Volatile Compounds.

are English and 9 are Soviet.

ASSOCIATION: Khimicheskiy fakul'tet MGU (Department of Chemistry of the Moscow State University)

SUBMITTED: July 11, 1957.

Card 3/3 1. Complex compounds 2. Molecules--Structural analysis
3. Electronic equipment--Applications

GORBACHEV, A.A.; VINOGRADOV, M.I.

Concerning the use of an image signal extrapolation method for suppressing impulse interference. Elektrosviaz' 16 no.12: 69-71 D '62. (MIRA 16:1)
(Radio—Interference) (Radiotelephone)

25522 S/108/61/016/008/004/006
D280/D304

6.4400

AUTHORS: Gorbachev, A.A. and Vinogradov, M.I., Members of Society (See Association)

TITLE: Application of the signal extrapolation method in pulse interference suppression

PERIODICAL: Radiotekhnika, v. 16, no. 8, 1961, 48-53

TEXT: The present article gives a description of a simple arrangement which makes possible the blocking of the LF end of the receiver for the duration of interference and also permits the extrapolation of the signal using two or three terms of the polynomial in (Eq. 1). Some experimental results are also given which illustrate the degree of distortion of the extrapolated signal. Figs. 1 and 2 show the bloc and circuit diagrams of the arrangement in which the extrapolation of signal is carried out using two terms only of the polynomial (1). The wanted signal, after being differentiated by R_1 and C_1 is applied to the grid of a cathode follower T_1 and from R_3 is applied to a gating cct consisting

Card 1/6

Application of the signal...

of diodes D_1, D_2, - and of the controlling tube T_2. With no interference T_2 is cut off, the signal charges the 'memory' capacitor C_3 which does not unduly affect the HF components because of the low output impedance of the cathode follower and of the diodes D_1 and D_2. The operating point of the diodes chosen on linear parts of their characteristics, is obtained by passing an additional d.c. current from source E_{a2}. From C_3 the signal goes on to an integrating network R_5 and C_4; so that R_1C_1 and R_5 are so chosen so as to assure the equalization of the frequency response and when interference is not present the extrapolated signal is transmitted without distortion. When at an instant-to-interference appears (Fig. 3a) its pulse, is applied with some phase load δ t_1 to a shaping network (one shot multivibrator on tube T_3). The resulting rectangular pulse with duration τ_o makes the tube T_2 conducting, the resultant voltage drop across R_4 cuts off diodes D_1 and

Card 2/6

Application of the signal... 25522

D_2, their internal resistance increases and C_3 is in effect disconnected from load R_3 of the cathode follower. The resultant increase in the time constant of the discharge of C_3 permits the retention of the signal for the duration of the interference pulse (Fig. 3b). After the end of the blocking pulse diodes D_1 and D_2 start conducting and C_3 rapidly charges to the potential of the signal, the integrating network R_5C_4 restores the signal to its original shape, except for time τ_o during which it is replaced by a section of a straight line, corresponding to the derivative of the signal (Fig. 3c). The cct is balanced by R_4. The amplitude and duration of the blocking signal are adjusted by potentiometers R_{11} and R_{12}. 6H3П (6N3P) double triodes were used. The diodes used were either semiconductor diodes ДГЦ27 (DG-Ts27) or thermionic diodes 6x2П (6Kh2P). The frequency response of the - extrapolating circuit is flat within 6 db from 100 to 7000 c/s. The amplitude response is linear for input signal range 0-30 volts, with distortion less than 1.5%. The overall gain is 0.03. The noise level at the output

Card 3/6

Application of the signal...

is 60 to 70 db below maximum signal at the interference repetition frequency f_n = 100 ÷ 5000c/s, the ''seeping through'' of the interference during time τ_o is practically zero. From circuit data the interference suppression should not be less than 60 db for DG-Ts27 and 70 db for 6Kh2P. The duration of the blocking pulse can be varied from 40 to 500 microsecond. For extrapolation using one term of the polynomial - C_3 was replaced by a resistance of 6.2 k/ohm, with the addition of one differentiating cct at the input and of one integrating at the output. In extrapolating a speech with a variable frequency f_n and τ_o the following was established. 1) The extrapolation does not introduce any noticeable speech distortion for $\tau_o < 50$ microsec., $f_n < 600 \div 800$ c/s and $f_n > 6000 \div 8000$ c/s. For $f_n \approx 600 \div 6000$ c/s distortions are noticeable but not unbearable. 2) for $\tau_o > 50$ microsec. distortions distinctly increase but signal is still understandable to a variable extent. The signal ceases to be understandable at $f_n > 1200$ c/s for n=1, at $f_n > 1000 \div$

Card 4/6

Application of the signal...

1200 c/s for n = 2 and at f_n 600 ÷ 800 c/s for n = 3. With impulsive interference at the input for its effective suppression (30 ÷ 40 db with respect to the signal) the required τ_0 = 400-500 microsec. for 10 to 20 ratio of the interference to signal at the input. It is stated in conclusion that the method described can be applied to radiotelephony where the quality of reproduced signal can be rather poor. There are 6 figures and 3 Soviet-bloc references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio and Electrical Communications im. A.S. Popov) [Abstractor's note: Name of association taken from first page of journal]

SUBMITTED: September 24, 1960

Card 5/6 (Legend to Fig. 1 see next card)

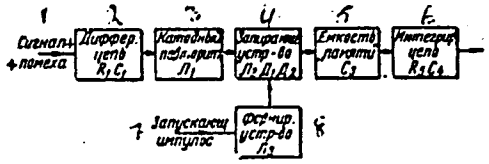
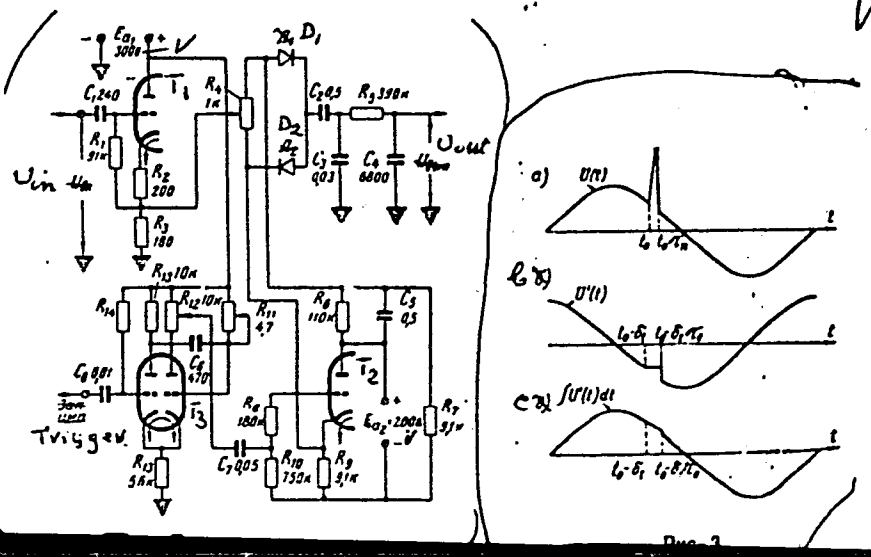


Fig. Рис. 1

Fig. 1.1.Signal + interference --> 2 Differentiating network R_1C_1 -->
3 Cathode follower T_1 --> 4 Blocking cct T_2 --> 5 Capacitive -->
D_1 D_2 memory C_3
6 Integrating network R_5C_4 --> 7 Trigger --> 8 Shaping Circuit
Pulse T_3

Figs. 2, 3a, 3b and 3c



Card 6/6

Vinogradov, M., jt. au.

UKTOMSKII, Alekseĭ Alekseevich, 1875-

Studies on parabiosis Moskva, Izd-vo Kommunisticheskoĭ akademii, 1927. 170 p.
At head of title: A. Ukhtomskii, L. Vasil'ev, M. Vinogradvo.

VINOGRADOV, M. I., ed.

Psychophysiology of labor in industry; collected studies of the psycho-physiological laboratory. Leningrad, 1935. 275 p.

1. Efficiency, Industrial. I. Vinogradov, M. I., ed. II. Shustin, N. A., jt.ed.

CU

VINOGRADOV, M. I.

"Academician Alexei Alexeevich Ukhtomsky." (1875-1942) (p. 201) by Vinogradov, M. I. (Elabuga)

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. 16, No. 2, 1943.

VINOGRADOV, Mikhail Ivanovich, 1890- ed.

Transactions of the jubilee scientific session; section of biological sciences. Leningrad. 1946. 246 p. (53-21862)

QH301.L4

VINOGRADOV, M.I.

Cortical influences on proprioceptive reflexes. Report no.1: Effect of exercise on the knee reflex. Uch. zap. Len. un. no. 99:124-147 '49. (MLRA 10:2)

(REFLEXES) (EXERCISE) (KNEE JOINT)

VINOGRADOV, M.I., professor.

[N.E.Vvedenskii's theory of fundamental nervous processes] Uchenie N.E. Vvedenskogo ob osnovnykh nervnykh protsessakh. [Moskva] Medgiz, 1952. 246 p. (MLRA 6:5)

(Vvedenskii, Nikolai Evgen'evich, 1852-1922) (Nervous system)

VINOGRADOV, M.I.

General characteristics of scientific concepts of I. P. Pavlov's and N. E. Vvedenskii's theories. Zh. vyssheĭ nerv. deiat. 2 no. 6: 792-811 Nov-Dec 1952. (CIML 24:1)

1. Leningrad.

VINOGRADOV, M. I., Prof.

Physiologists

Nikolay Yevgen'yevich Vvedenskiy, outstanding Russian physiologist (100th anniversary of his birth.) Vest. AN SSSR 22 no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952 [illegible], Uncl.

VINOGRADOV, M. I.

Scientific activity of N. E. Vvedenskii and its significance in the development of Pavlovian physiology. Fiziol. zh. SSSR 38 no. 2:137-159 Mar-Apr 1952. (CLML 22:3)

1. Leningrad.

SOKOLOVA, L.S., SHVANG, L.I.; VINOGRADOV, M.I., professor, redaktor; MEL'NIKOVA, G.G., redaktor

[Techniques of electroencephalographic investigations] Tekhnika elektroentsefalograficheskikh issledovanii. Leningrad, Izd-vo Leningradskogo universiteta, 1954. 133 p. (MLRA 8:4)
(Electroencephalography)

UKHTOMSKIY, Aleksey Alekseyevich, akademik; AYRAPET'YANTS, E.Sh., dotsent, redaktor; VASIL'YEV, L.L., professor, redaktor; VINOGRADOV, M.I., professor, redaktor; GOLIKOV, N.V., professor, redaktor; ZHUKOV, Ye.K., professor, redaktor; MEL'NIKOVA, G.G., redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor

[Collected works] Sobranie sochinenii. Leningrad, Izd-vo Leningradskogo univ. Vol.4.[Sketch of the physiology of the nervous system (from the general course in physiology at the Leningrad State University) Ocherk fiziologii nervnoi sistemy. (Iz obshchego kursa fiziologii v Leningradskom gosudarstvennom universitete). 1954. 229 p. Vol.5. [Reviews and other articles] Obzornye i drugie stat'i. 1954. 231 p. (MLRA 10:1)

(PHYSIOLOGY)

VVEDENSKIY, N.Ye.; VASIL'YEV, L.L., professor, redaktor; VINOGRADOV, M.I., professor redaktor; VETYUKOV, I.A., dotsent, redaktor; GOLIKOV, N.V., professor, redaktor; SHUKOV, Ye.K., professor, redaktor; MAKAROV, P.O., professor, otvetstvennyy redaktor; MEL'NIKOVA, G.G., redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor

[Complete collected works] Polnoe sobranie sochinenii. Leningrad, Izd-vo Leningradskogo gos. univ. im. A.A.Zhdanova. Vol.5. [A course of lectures on animal and human physiology delivered at St.Petersburg University from 1911-1913] Kurs lektsii po viziologii zhivotnykh i cheloveka chitannykh v Peterburgskom universitete v 1911-1913 g.g. 1954. 380 p. (MLRA 10:1)

(PHYSIOLOGY)

VINOGRADOV, M.I.

"Contemporary status and current tasks of labor Physiology in USSR."
Gigiyena i Sanitariya, No 3, pp 3-10, 1954.

Translation-M-393, Apr 27 1955.

VINOGRADOV, M.I.

Present status of physiological work and future tasks. Mezhegeszsegugy 35 no.10:253-256 Oct 54.
(PHYSIOLOGY
research)

VINOGRADOV, M.I.; VOROB'YEVA, V.S.

Role of the singnal systems in anticipatory innervation of the muscular activity of man. Vest. Len. un. 9 no.4:97-107 Ap '54 (MLRA 8:6)
(Muscle--Innervation)

VVEDENSKIY, Nikolay Yevgen'yevich; VASIL'EV, L.L., professor; redaktor; VINOGRADOV, M.I., professor, redaktor; VETYUKOV, I.A., dotsent, redaktor; GOLIKOV, N.V., professor, redaktor; ZHUKOV, Ye.K., professor; SHCHERBAKOVA, G.A., redaktor; IVANOV, V.V., tekhnicheskiy redaktor.

[Complete works] Polnoe sobranie sochinenii. Leningrad, Izd-vo Leningradskogo gos. ordena Lenina univ.im.A.A.Zhdanova. Vol.6. [Supplements and annotations to Russian translations of textbooks on physiology, 1886-1899] Dopolneniia i primechaniia k russkim perevodam uchebnikov po fiziologii, 1886-1889 gg. 1956. 220 p. (Physiology) (MLRA 9:6)

VINOGRADOV, M.I.

Forty years of Soviet physiology (1917-1957) [with summary in English] Vest. LGU 13 no.9:120-141 '58. (MIRA 11:6)
(PHYSIOLOGY)

VINOGRADOV, M. I.

124-11-12667

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 49 (USSR)

AUTHOR: Vinogradov, M. I., and Kirsanov, M. V.

TITLE: The Hydraulic Friction of Water Pipes Made of Glass.
(Gidravlicheskoye soprotivleniye steklyannykh vodoprovodnykh trub)

PERIODICAL: Tr. Mosk. in-ta inzh. zh. -d. transp., 1957, Nr 88/9, pp 3-13

ABSTRACT: The hydraulic friction of water pipes made of glass was determined at the Hydraulics Laboratory of the MIIG, over a Reynolds Number range from 10^4 to 36×10^4, by means of glass tubes having a diameter of 57 mm. The 3-meter long tubes were connected with rubber sleeves, reinforced with wire shielding. The hydraulic head losses were measured by means of piezometric sensors, the through-flow by volumetric means, and the inner diameter of the tubes by weighing first an empty tube and then the tube filled with water.

The tests showed that the glass tubes used had a somewhat higher hydraulic friction than smooth tubes (the friction coefficient λ was 7 percent greater than that obtained for hydraulically smooth tubes from Prandtl's and Al'tshul's formulas) which, in the opinion of the Authors, can be attributed to the joints. Considering, however, that the increase in the friction of glass tubes as compared to hydraulically

Card 1/2

The Hydraulic Friction of Water Pipes Made of Glass, (continued)

smooth tubes has been observed in the main at high Reynolds Numbers, one may conclude that the glass tubes used may not be considered hydraulically smooth and that calculations thereon must be based on generalized formulas including roughness terms.

A. D. Al'tshu

Card 2/2

SOV/124-58-1-611

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 76 (USSR)

AUTHOR: Vinogradov, M. I.

TITLE: Submergence Criterion for a Broad-crested Weir (Kriteriy zatopleniya vodosliva s shirokim porogom)

PERIODICAL: Tr. Mosk. in-ta inzh. zh.-d. transp., 1957, Nr 88/9, pp 68-74

ABSTRACT: The author considers the submergence criterion for a broad-crested weir, $H_{t-w} > h_2$, where h_2 is the depth that is conjugated with the depth h_1 in the constricted section ($h_2 = h_1 \Pi_k$; $\Pi_k = \alpha q^2 / g h_1^3$) and H_{t-w} is the depth of the tail water relative to the weir crest, to be invalid and employs the Bernoulli equation for the computation of the mean depth beyond the jump-wave, assuming that there are no losses in the jump-wave. As a result the author offers a submergence criterion in the form

$$H_{t-w} > h_k \left(\epsilon_2 + \frac{\psi}{\epsilon_2^2}\right) \quad \text{or} \quad \frac{H_{t-w}}{h_k} > \left(\epsilon_2 + \frac{\psi}{\epsilon_2^2}\right)$$

Card 1/2 where

Submerged Criterion for a Broad-crested Weir SOV/124-58-1-611

$$\epsilon_2 = h_2/h_k \quad \text{and} \quad \psi = \frac{\omega_2}{\omega_{t-w}} - \frac{\omega_2^2}{\omega_{t-w}^2}$$

ω_2 and ω_{t-w} are the areas of the cross sections of the flow where the depths are h_2 and H_{t-w}, respectively. The magnitude of ϵ_2 is dependent on $\epsilon_1 = h_1/h_k$, that of ψ on ω_2/ω_{t-w} (varying between 0.25 and 0). For these limits the author determines boundary values of the submergence criterion H_{t-w}/h_k = 1.40 and 1.236 (rough entry, ϵ_1=0.82, ϵ_2=1.236) and H_{t-w}/h_k=1.286 and 1.065 (smooth entry, ϵ_1=0.94, ϵ_2=1.065). A verification of the proposed submergence criterion was performed using tests by A. R. Berezinskiy and by the author and, as the latter notes, showed good agreement with the proposed criterion.

A. R. Berezinskiy

Card 2/2

VINOGRADOV, M.I.

124-11-12690

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p. 52 (USSR)

AUTHOR: Vinogradov, M. I.

TITLE: On the Hydraulically Most Advantageous Cross-Sections of Trapezoidal Channels. (O gidravlicheski naivygodneyshem sechenii trapetsoidal'nykh kanalov)

PERIODICAL: Tr. Mosk. in-ta inzh. zh. -d. transp., 1957, Nr 88/9, pp 75-83

ABSTRACT: The A. shows that in the design of trapezoidal channels it is permissible to deviate appreciably from the hydraulically optimal cross-section, since any increase in the width relative to the hydraulically optimal width results in but an insignificant increase in the active cross-sectional area.

To demonstrate this proposition, the A., with the aid of the Manning formula, investigates the relationship

$$\frac{\omega}{\omega_o} = 4\sqrt{\frac{(\beta + m')^2}{4(m' - m)(\beta + m)}}$$

Card 1/2

124-11-12690

On the hydraulically most advantageous cross-sections of trapezoidal channels (cont.)

where ω is the area of the active cross-section of the channel to be designed and ω_0 is the area of the optimal cross-section. Analogous conclusions are contained in the reviewer's book, "Canals and Their Construction" (Kanaly i sooruzheniya na nikh), Gosstroyizdat, 1953, pp 21-27, pp 60-79,

A. A. Uginchus

Card 2/2

VINOGRADOV, M.I., dotsent, kand.tekhn.nauk

Establishing the nature of streamflow through the waterway opening of a small bridge. Trudy MIIT no.107:11-17 '60. (MIRA 13:7)

(Hydraulics)

VINOGRADOV, M.I., dotsent, kand.tekhn.nauk

Characteristics of the hydraulic regimen of streamflow below a small bridge under conditions of restricted expansion. Trudy MIIT no.107:18-23 '60. (MIRA 13:7)
(Hydraulics)

VINOGRADOV, M.I., dotsent, kand.tekhn.nauk; LEVIN, B.M., assistent

Measuring the discharge of hydraulic mixtures by a full-pressure reversed pipe. Trudy MIIT no.107:24-27 '60. (MIRA 13:7)

(Hydraulics)

BOGOMOLOV, Anatoliy Ivanovich, prof.; KONSTANTINOV, Nikolay Mikhaylovich; VINOGRADOV, M.I., kand.tekhn. nauk, dots., red.; ZUBKOVA, M.S., red.izd-va; BODANOVA, A.P., tekhn. red.

[Examples of hydraulic calculations]Primery gidravlicheskikh raschetov. Moskva, Avtotransizdat, 1962. 574 p. (MIRA 16:2)

1. Moskovskiy avtodorozhnyy institut (for Bogomolov).
(Hydraulics—Problems, exercises, etc.)

VINOGRADOV, M.I., kand. tekhn. nauk

Deformation of straight canals in sandy soils. Trudy MIIT no.176:26-33 '63. (MIRA 17:6)

ACC NR: AP6013510 UR/0120/66/000/002/0108/0112

AUTHOR: Vinogradov, M.I.; Rudnitskiy, Ye.M.

ORG: None

TITLE: Triode magnetic-discharge pump with cooled electodes

SOURCE: Pribory i tekhnika eksperimenta, no.2, 1966, 108-112

TOPIC TAGS: pump, vacuum pump, magnetic discharge pump / NEM-100-2 magnetic discharge pump

ABSTRACT: This paper is concerned with triode magnetic field / electric discharge high vacuum pumps with cooled electrodes. The topic of interest is the cooled electrodes feature. It is shown that the cooling of the pump decisively improves its performance. The pump then works stably and starts well at a higher fore-pressure, and attains a lower vacuum in a shorter time than the uncooled pump. An exploratory model of a cooled electrode pump was built first. Its magnetic field of 2 koe was supplied by an electromagnet; the cathode potential was 7 kv. With the electrodes cooled with liquid nitrogen, the pump delivered a limiting vacuum of 1.10^{-11} torr in 8 hours. In the uncooled state, the respective values were 2.10^{-10} and 48 hours. An experimental prototype pump was then constructed and tested. The basic pumping parameters were determined and are presented in the paper. Fig. 1. shows the load pressure as a function of time from start. 1 - for the uncooled pump and 2 - for the cooled electrodes pump.

Card 1/2 UDC: 621.527

ACC NR: AP6013510

Parameters of the uncooled production magnetic-dicharge pump NEM-100-2 are also given in a table. The magnetic discharge pumps are noted by their reliability which is re-

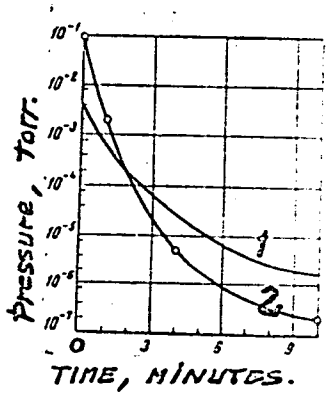


Fig. 1. The dependence of load pressure upon time, P = f(t), after pump start. 1 - uncooled; 2 - cooled electrodes.

tained by the cooled electrode variant. The triode type magnetic discharge pumps require more power and have therefore a higher weight than the diode type pumps. Orig. art. has 7 figures and 3 tables.

SUB CODE: 13 SUBM DATE: 23Feb65 ORIG REF: 000 OTH REF: 005

Card 2/2

ACC NR: AP7001967 SOURCE CODE: UR/0120/66/000/006/0210/0211

AUTHOR: Vinogradov, M. I.; Ul'yanov, V. F.

ORG: none

TITLE: Vaporization of permalloy with an electron beam

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 210-211

TOPIC TAGS: permalloy, iron nickel alloy, permalloy vaporization, electron beam, ~~vaporizer, permalloy vacuum vapor deposition~~ metal vapor deposition

ABSTRACT: Vapor deposition of permalloy in a (1—2) 10^{-5} torr.^{5} Vacuum in a laboratory unit equipped with an electron-beam vaporizer is described. An electron beam with 3 KW power vaporized a permalloy rod, 20 mm in diameter, at a rate of 1 g/min. The rate of condensation on the 50 x 50 mm^2 substrate, made of copper foil and located 200 mm from the beam focus, was found to be 1.5 μ/min. The yield of the condensate ammounted to 2.5% of the vaporized metal. The nickel content in the condensates varied within 75.2—75.9%, which indicated that the alloy fractionation is insignificant. Apparently the intensive vaporization of alloy from a small area of the beam focus (7 x 0.7 mm) causes the removal of the volatile component (iron) from the surface layer. Thus, vaporizers with an electron beam can vaporize substantial quantities of

Card 1/2 UDC: 539.239

ACC NR: AP7001967

permalloy and can yield films with a composition varying within ±0.2%.
Orig. art. has: 1 figure and 1 table.

SUB CODE: 13, 11/ SUBM DATE: 29Nov65/ ORIG REF: 002/
OTH REF: 004

Card 2/2

VINOGRADOV, M.I., kand.tekhn.nauk

Precision in calculating water-supply and sewer systems. Nov. tekh. zhil.-kom. khoz.: Vod. i kan. no.2:28-38 '63. (MIRA 17:9)

VINOGRADOV, M.I., otv. red.; TOCHILOV, K.S., otv. red.; KHAVKINA, N.N., otv. red.; AVER'YANOV, V.S., red.; OSIPOVA, O.V., red.; UTKINA, N.S., red.; KISELEVA, L.I., tekhn. red.

[Materials of the Scientific Conference on Work Physiology Devoted to the Memory of A.A.Ukhtomskii] Materialy Nauchnoi konferentsii po fiziologii truda, posviashchennaia pamiati A.A.Ukhtomskogo. Leningrad, Izd-vo Leningr. univ., 1963. 372 p. (MIRA 17:3)

1. Nauchnaya konferentsiya po fiziologii truda, posvyashchennaya pamyati A.A.Ukhtomskogo. 2. Fiziologicheskiy institut im. A.A.Ukhtomskogo Leningradskogo gosudarstvennogo universiteta (for Aver'yanov, Vinogradov, Osipova, Tochilov, Utkina, Khavkina)

VINOGRADOV, M.I.

Experimental study of an extrapolation method of impulse noise suppression in fascimile signal reception. Izv. vys. ucheb. zav.; radiotekh. 6 no.5:569-571 S-O '63. (MIRA 17:1)

1. Rekomendovano Nauchno-issledovatel'skim radiofizicheskim institutom pri Gor'kovskom gosudarstvennom universitete imeni N.I. Lobachevskogo.

24(8) PHASE I BOOK EXPLOITATION SOV/2117

Soveshchaniya po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956

Eksperimental'naya tekhnika i metody issledovaniy pri vysokikh temperaturakh; trudy soveshchaniya (Experimental Techniques and Methods of Investigation at High Temperatures; Transactions of the Conference on Experimental Techniques and Methods of Investigation at High Temperatures) Moscow, AN SSSR, 1959. 789 p. (Series: Akademiya nauk SSSR. Institut metallurgii. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali) 2,200 copies printed.

Resp. Ed.: A.M. Samarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.I. Bankvitser.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes 2) constitution diagram studies 3) physical properties of liquid metals and slags 4) new analytical methods and production of pure metals 5) pyrometry, and 6) general questions. For more specific coverage, see Table of Contents.

Vinogradov, K.N., and R.Ye. Rybinskiy. Technique of Vaporizing Refractory and Chemically Active Metals in a Vacuum With the Aid of a Focused Electron Beam 104

A small metal specimen is placed in a crucible made of the same metal as the specimen itself. A stream of electrons, emitted by an incandescent cathode and accelerated by an electrical field to the energy level of several thousand electron volts, is directed onto the specimen. The metal will melt if the power input is sufficiently high. Superheating of the metal above the boiling point, necessary for rapid vaporization of a number of refractory metals, presents difficulties because of the rapid heat transfer caused by convection currents in the liquid metal. Increasing the intensity of the electron beam overcomes this difficulty, but it is more advisable to increase the concentration of the power input, focusing the electron beam on a small area of the metal surface. A very intense local heating is thus obtained, so that in spite of a reduction of evaporative surface, the overall rate of evaporation increases greatly in comparison with that for a metal specimen heated with a scattered electron beam. The comparative simplicity of producing a high concentration of power input in heating by electron bombardment makes this method especially convenient for vaporizing small quantities (several grams) of refractory metals under laboratory conditions. Metals amenable to such treatment are titanium, zirconium, tungsten, molybdenum, tantalum, niobium, and boron. Two types of vaporizers are described. Three applications of the method are: 1) application of thin layers of refractory and active metals to various surfaces 2) production of thin free films of these metals 3) metallographic study of condensed two-component and multicomponent systems by S.A. Vekshinskiy's method.

Card 6/32

33255
S/632/60/000/019/005/009
D053/D113

101500
26.2190
26.4100

AUTHORS: Zakharov, Yu.G., and Vinogradov, M.N.

TITLE: A hot-wire anemometer with thermistor

SOURCE: Moscow. Tsentral'nyy aero-gidrodinamicheskiy institut. Promyshlennaya aerodinamika, no. 19, 1960. Izmereniye vozdushnykh potokov, 58-61

TEXT: Design of a hot-wire anemometer using a thermistor as sensing element instead of a wire filament is given. The electric anemometer circuit (Fig. 1) is a bridge circuit composed of resistors a, b, and r in the three arms and a TC -8 (TS-8) bead thermistor R_{therm} in the fourth arm. The TS-8 thermistor is shaped like a sphere, 0.2 mm in diameter. Its temperature response is closely approximated by the exponential curve:

$$R = Ae^{B/T},$$

where R is the thermistor resistance, T is the absolute temperature, and A and B are constants. The A constant varies for different thermistors while

Card 1/2

A hot-wire anemometer with thermistor

the B constant is practically the same and for the TS-8 thermistor equals about 3,000° abs. The temperature coefficient of the thermistor resistance is given by

$$\alpha \sim \frac{1}{R} \frac{\partial R}{\partial T} \sim -\frac{B}{T^2},$$

that is, the resistance decreases as the temperature increases. For the TS-8 thermistor, at $T \approx 300°$ abs, the temperature coefficient (α) is equal to about 0.04. The disadvantage of these thermistors is their limited temperature range, about 100°C, and their susceptibility to ambient temperature changes. These temperature changes can be automatically compensated by inserting additional elements into the bridge circuit, as illustrated in Fig. 2. The values of the metallic resistor R_m and the manganin shunt resistor R_{sh} should be individually calculated for each operating temperature range of the bead thermistor R_{therm}. The described anemometer circuit can be used measuring moderate and slowly varying flow velocities. It is not suitable for measuring flow velocity fluctuations because of the circuit high time constant. There are 4 figures and 2 Soviet-bloc references.

Card 2/02

ZAKHAROV, Yu.G.; VINOGRADOV, M.N.

Thermoanemometer with semiconductor thermoresistance. Prom. aerodin. no.19:58-61 '60. (MIRA 14:6)
(Anemometer)

VINOGRADOV, M.P., prof., otv. red.; POLYANICHKO, Ya.I., kand. sel'khoz. nauk, otv. red.; NATAROVA, N.V., red. izd-va; ZENDEL', M.Ye., tekhn. red.

[Northern reindeer in the Karelian A.S.S.R.; morphology, taxonomy, ecology, physiology, problems of reindeer farming] Severnyi olen' v Karel'skoi ASSR; morfologiia, sistematika, ekologiia, fiziologiia, voprosy oenevodstva. Moskva, Izd-vo Akad. nauk SSSR, 1962. 178 p. (MIRA 15:2)

1. Akademiya nauk SSSR. Karel'skiy filial. Petrozavodsk.
(Karelia--Reindeer)

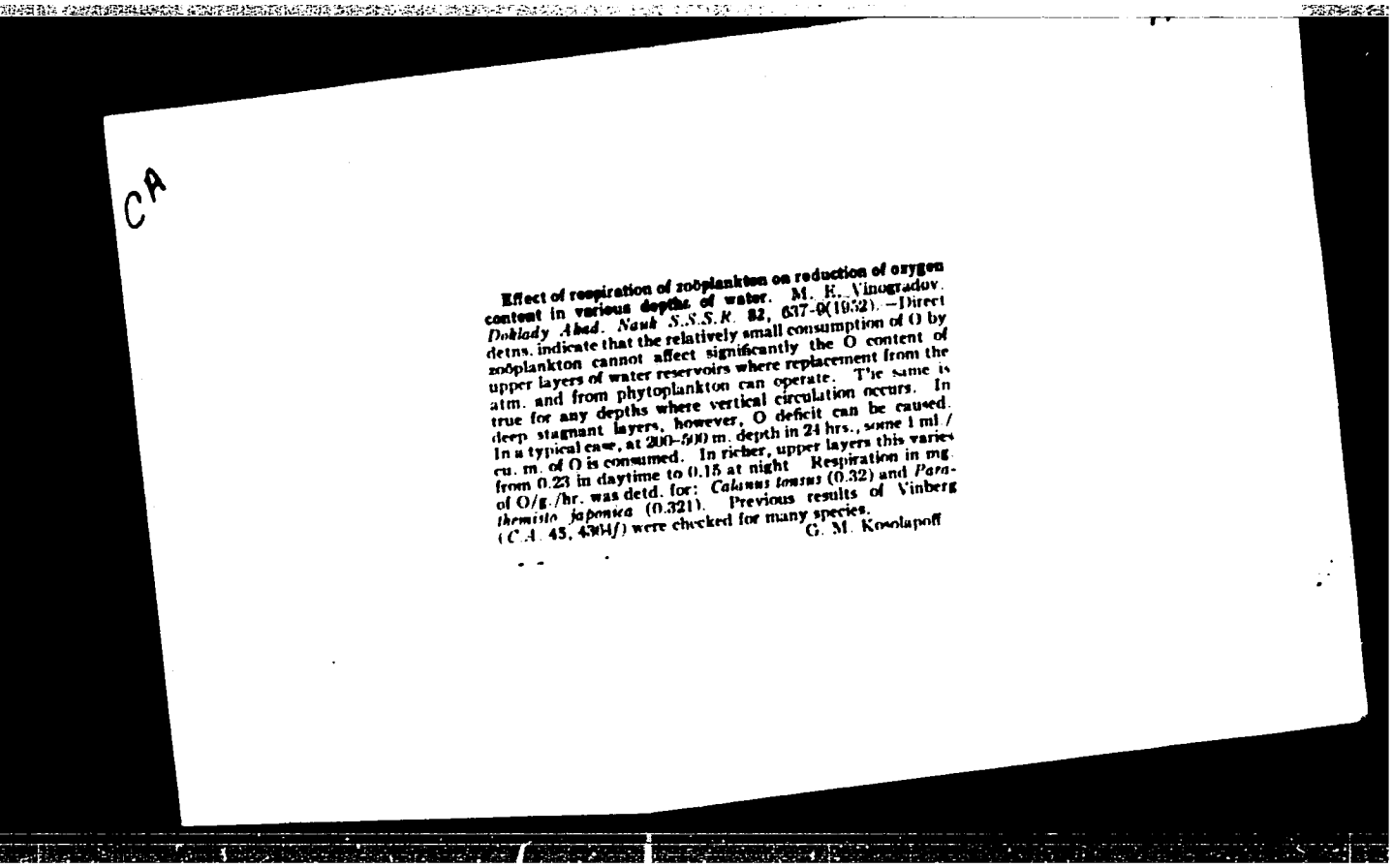
BIRSHTEYN, Ya.A., VINOGRADOV, M.Ya.

Pelagic gammarids of the northern part of the Indian Ocean.
Trudy Inst. okean. 65:152-196 '64. (MIRA 18:8)

VINOGRADOV, M.Ye.; PARIN, N.V.; FILATOVA, Z.A.

Zoological investigations during the 34th cruise of the research ship "Vitiaz'" in the equatorial Pacific. Zool. zhur. 41 no.9:1442-1448 S '62. (MIRA 15:11)

1. Institut Okeanologii AN SSSR, Moskva.
(Pacific Ocean--Marine fauna)



CA

Effect of respiration of zoöplankton on reduction of oxygen content in various depths of water. M. E. Vinogradov. *Doklady Akad. Nauk S.S.S.R.* **82**, 637-9(1932).—Direct detns. indicate that the relatively small consumption of O by zoöplankton cannot affect significantly the O content of upper layers of water reservoirs where replacement from the atm. and from phytoplankton can operate. The same is true for any depths where vertical circulation occurs. In deep stagnant layers, however, O deficit can be caused. In a typical case, at 200–500 m. depth in 24 hrs., some 1 ml./cu. m. of O is consumed. In richer, upper layers this varies from 0.23 in daytime to 0.15 at night. Respiration in mg. of O/g./hr. was detd. for: *Calanus finmus* (0.32) and *Paramithemisto japonica* (0.321). Previous results of Vinberg (*C.A.* 45, 4304*f*) were checked for many species.

G. M. Kosolapoff

VINOGRADOV, M. YE.

Plankton

Coefficient of intensivity of vertical migration of zooplankton. Dokl. AN SSSR 82 no. 5, 1952, Recd 8 Dec. 1951

SO: Monthly List of Russian Accessions, Library of Congress, _____1953, Uncl.

1. BEKLEMISHEV, K. V., VINOGRADOV, M. Ye. and LUBNY-GERTSYK, Ye. A.

2. USSR (600)

4. Plankton

7. Effect of mass accumulations of planktonic flora upon animals, smothering of Copepoda and other animals by diatoms, Dokl, AN SSSR 86 No. 5, 1952.

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

VINOGRADOV, M.Ye.

Diurnal vertical migrations of zooplankton of Far Eastern seas. (MLRA 7:11)
Trudy Inst.okean. 8:164-199 '54.
(Pacific Ocean--Zooplankton) (Zooplankton--Pacific Ocean)

VINOGRADOV, M-E.

USSR/Biology - Crustacea

Card 1/1 : Pub. 86 - 38/46

Authors : Birshteyn, Ya. A., Prof.; Vinogradov, M. E.

Title : Chirping sidewise-swimming crabs

Periodical : Priroda, 43/9, 119-120, Sep 1954

Abstract : An account is given of a crustacean of the genus Hyperiopsis, which emits sonic or supersonic vibrations and also perceives them. Illustrations.

Institution : ..... Moscow State U. (Birshteyn)

Submitted : ..... → Inst. Oceanology, AS USSR (Vinogradov)

BIRSHTEYN, Ya.A.; VINOGRADOV, M.Ye.; CHINDONOVA, Yu.G.

Vertical zonation of plankton of the Kuril--Kamchatka marine depression. Dokl.AN SSSR 95 no.2:389-392 Mr '54. (MLRA 7:3)

1. Institut okeanologii Akademii nauk SSSR. 2. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Okhotsk, Sea of--Plankton) (Plankton--Okhotsk, Sea of)

VINOGRADOV, M.Ye.

Vertical distribution of zooplankton biomasses in the Kurile-Kamchatka trench. Dokl.AN SSSR 96 no.3:637-640 My '54. (MLRA 7:6)

1. Institut okeanologii Akademii nauk SSSR.
Predstavleno akademikom D.I.Shcherbakovym.
(Okhotsk, Sea of--Zooplankton) (Zooplankton--Okhotsk, Sea of)

VINOGRADOV, M. Ye.

"Vertical Distribution and Migration of Zooplankton in the Bering and Okhotsk Seas and the Northwestern Part of the Pacific Ocean." Cand Biol Sci, Inst of Oceanology, Acad Sci USSR, Moscow, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

VINOGRADOV, M.Ye.

Pattern of the vertical distribution of zooplankton in the waters of the Kurile-Kamchatka Trench. Trudy Inst.okean. no.12:177-183 '55. (MLRA 8:9)
(Kurile Trench--Zooplankton)

BIRSHTEYN, Ya.A.; VINOGRADOV, M.Ye.

Pelagic gammarids (Amphipoda - Gammaridea) of the Kurile-Kamchatka Trench. Trudy Inst.okean. no.12:210-287 '55.
(Kurile Trench--Amphipoda) (MLRA 8:9)