Pressure Treatment of Alloys (Cont.)   SOV/1302

TABLE OF CONTENTS:

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L 44313-66   EWT(m)

ACC NR: AP6029429   SOURCE CODE: UR/0205/66/006/004/0630/0630

AUTHOR: Manoylov, S. Ye.; Grannikova, A. V.

ORG: Central Scientific Research Institute of Roentgenology and
Radiology, MZ SSSR, Leningrad (Tsentral'nyy nauchno-issledovatel'skiy
rentgeno-radiologicheskiy institut MZ SSSR); Leningrad Chemical and
Pharmaceutical Institute, MZ RSFSR (Leningradskiy khimiko-farmatsevti-
cheskiy institut MZ RSFSR)

TITLE: The effect of dicaptol in acute radiation sickness

SOURCE: Radiobiologiya, v. 6, no. 4, 1966, 630

TOPIC TAGS: biologic radiation effect, radioprotector, dicaptol, mouse,
metal enzyme, tissue respiration, x ray, RADIATION SICKNESS,
ANTIRADIATION DRUG

ABSTRACT: The effect of protective agents in acute radiation sickness
was investigated using dicaptol, which was chosen for its ability to
form complex compounds with metal enzymes and to inhibit their function.
Thirty-nine hybrid white mice were injected intramuscularly twice in
four hr with 0.2 ml dicaptol, and, immediately following the last
injection, were irradiated with 800 r on a RUM-3 device (18 ma, 180 kv,
0.5 mm Cu and 1 mm Al filters, 50 r/min). The effect of the prepara-
tion was determined on the basis of viability, body weight, and

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L 44313-66

ACC NR: AP6029429

leukocyte count. Results showed that 67.8% of the experimental animals
survived compared to 5% for the controls (the majority of deaths
occurring from the 5th—12th days after irradiation). The test animals
lost less weight. Leukocyte count decreased uniformly on the fifth day
for both groups, but then returned to normal in the test group. Dicaptol
apparently forms a complex compound with the metal enzymes which partic-
ipate in tissue respiration, inhibiting their active role. Penetrating
radiation cannot destroy this compound, so the metal enzymes remain
unharmed. Dicaptol later separates from the metal enzymes, freeing
them to participate in tissue respiration. Dicaptol, cyanide, and
irradiation, all of which increase the sensitivity of animals to
hypoxia, inhibit, and therefore protect, the activity of metal enzymes
(cytochromes and others) in tissue respiration.   [SW]

SUB CODE: 06/ SUBM DATE: 23Sep65/ ORIG REF: 005/ ATD PRESS: 5073

Card 2/2

GREDZHEV, A. F. (Donetsk, 55, ul. Shchorsa, 10, kv. 7); GRANOV, A. M. (Donetsk, ul. Artema, 77/75, kv. 13)

Diagnosis and treatment of cancer of Vater's ampulla. Vop. onk. 8 no.1:25-30 '62.
(MIRA 15:2)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. K. T. Ovnatanyan) Donetskogo meditsinskogo instituta (dir. - dots. A. M. Ganichkin) na baze oblastnoy klinicheskoy bol'nitsy im. M. I. Kalinina (glav. vrach - V. F. Zubko)

(DUODENUM—CANCER)

OVNATANYAN, K.T., prof. (Donetsk, Pushkinskaya ul., d. 129, kv.63);
    GRANOV, A.M.

Experience with repeated operations on the biliary tract.
Vest. khir. 91 no.7:16-22 Jl'63   (MIRA 16:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof.
K.T.Ovnatanyan) Donetskogo meditsinskogo instituta imeni
A.M.Gor'kogo.

GRANOV, L. G.

USSR/Medicine - Wounds   11 Nov 49
Skin, Regeneration

"Rate of Epithelization in Skin Wounds Under Conditions Occurring in the Lowlands and High Mountain Regions," L. G. Granov, O. T. Utkina, L. S. Sutulov, Stalinabad Med Inst, 2¼ pp

"Dok Ak Nauk SSSR" Vol LXIX, No 2

Similar skin wounds open, without suture, and closed by suture, were made in 30 dogs at 3,560 meters above sea level (Anzob Pass, Tadzhikistan) and in the lowlands (Stalinabad). They were examined and slides made at various intervals of

USSR/Medicine - Wounds   11 Nov 49
(Contd)

hours and days. Results of examinations, given in detail, show that regeneration of epithelium and whole healing process are retarded at high altitudes. Submitted by Acad A. I. Abrikosov 30 Jul 49.

157T65

157T65

GRANOV, L. G.

"Concerning the Healing of Wounds Under Conditions
Encountered in High-Mountain Country".

Thesis for degree of Dr. Medical Sci. Sub. 23,
Oct. 50, First Moscow Order of Lenin Medical Inst.

Summary 71, 4 Sep. 52. Dissertations Presented for
Degrees in Science and Engineering in Moscow in 1950.
From Vechernyaya Moskva, Jan-Dec 1950.

GRANOV, L. G.

PA 193T71

USSR/Medicine - Healing of Wounds   Oct 51

"Clinical Comparison Between the Healing of
Wounds in Mountainous Regions and in Valleys,"
L. G. Granov, Head of the Chair of Operative
Surg, Stalinabad Med Inst

"Khirurgiya" No 10, pp 46-51

Investigated healing at 850 and 3460 m elevation
of wounds inflicted on exptl animals (dogs).
Found healing was considerably slower at the
higher elevation, and the effect of the altitude
in slowing down healing persisted for 12 days

USSR/Medicine - Healing of Wounds (Contd)   Oct 51

                                                  193T71

after animals had been removed from the mountain
to a valley where wounds were inflicted. This
includes behavior of infected wounds.

193T71

GRANOV, L.G.

(Lev Grigor'yevich)

"On the Healing of Wounds at High Altitudes," (Dissertation), Academic degree of Doctor in Medical Sciences, based on his defense, 23 February 1954, in the Joint Council of the Group of Leningrad Insts. Acad Med Sci USSR,

Izhevsk Medical Inst.

●-M-3,054,778,   2 Oct 57

GRANOV, L.G., prof.

Specific features of wound healing in inhabitants of mountainous
regions [with summary in English]. Khirurgiia 33 no.9:48-53 S '57.
(MIRA 11:4)

1. Iz kafedry gospital'noy khirurgii Izhevskogo meditsinskogo
instituta.
(WOUNDS AND INJURIES
healing in inhabitants of mountanous regions)

GRANOV, N.A.; SIVOVOLOV, D.V., red. izd-va; FOSS, Yu.A., tekhn. red.

[V.I.Lenin and the development of construction in the Soviet
Union] V.I.Lenin i razvitie stroitel'stva v Sovetskoi strane.
Voronezh, Izd-vo Voronezhskogo univ., 1960. 33 p.

(MIRA 14:9)

(Construction industry)

BATALOV, N. (Stalinogorsk); MENTSINGER, V., klepker (Moskva); DEDKOVSKIY, M., (g. Yakutsk); ICHITOVKIN, Ye. (g. Vyborg). SERGEYEV, A.; GRAKOV, V.; ALESHECHKIN, V. (Moskva); LIKHANOV, A. (g. Kirov); USTINOV, A. (g. Noginak).

Letters to the editor. Sov. foto 19 no.2:86-87 F '59.

(MIRA 12:3)

1.Mosknigotorg (for Mentsinger).
                    (Photography)

GRANOV, Vladimir Dmitriyevich; STEPANYAN, N.I., red.; YELAGIN, A.S.,
   tekhn.red.

[Time works for us] Vremia rabotaet na nas. Moskva, Izd-vo
"Sovetskaia Rossiia," 1959. 44 p.   (MIRA 14:1)
   (Russia—Industries)   (Competition, International)

MERKOV, A.M., prof.; OVCHAROV, V.K., kand.med. nauk; GRANOVA, L.S.,
    et.labunat; MERKOV, A.M., red.; KUZ'MINA, N.S., tekhn.
red.

[Medical statistics; a bibliography of the Soviet literature,
1918-1960] Sanitarnaia statistika; bibliografiia sovetskoi
literatury, 1918-1960 gg. Moskva, Medgiz, 1963.   358 p.
                                          (MIRA 17:1)

SUBBOTINA, I.A.; TSELISHCHEV, A.M.; GRANOVESOVA, R.A.

Clinical and epidemiological characteristics of enterovirus
diseases in Tomsk. Trudy TomNIIVS 14:65-70 '63. (MIRA 17:7)

1. Tomskiy meditsinskiy institut.

SOV/96-58-8-3/22

AUTHORS: Sobolev, S.P. and Granov, V.Ye. (Engineers)

TITLE: The Modernisation of Turbine VR-25-1 of the Khar'kov
Turbine Works, and Analysis of the Results obtained.
(Modernizatsiya turbiny VR-25-1 Khar'kovskogo turbinogo
zavoda i analiz poluchennykh rezul'tatov)
V.L.6

PERIODICAL: Teploenergetika, Nr 8, 1958, pp 13-16 (USSR)

ABSTRACT: Recent improvements in blading design have given much
better stage efficiencies in turbine test rigs.   The
main object of the modernisation of turbine type VR-25-1
carried out by the Khar'kov Turbine Works in 1956 was to
verify in practice the effectiveness of the new principles
of designing the flow paths of turbines and to see whether
the improvement corresponded to that obtained in rig
tests.   The new guide vanes and working blades had
profiles C-1 and T-2a respectively.   The new blades were
made narrower than the old and the stage reaction was
increased from 5 to 12-15% to obviate negative reaction
at the blade roots.   Other changes that were made in
the turbine are described; loss calculations are
considered and the old and new designs are compared in
Table 1.   The reconstructed turbine was tested three
times by the All-Union Thermo-Technical Institute.

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SOV/96-58-8-3/22

The Modernisation of Turbine VR-25-1 of the Khar'kov Turbine Works, and Analysis of the Results obtained.

The test results were given in an article by Rubinshteyn, Gribkov and Ыdigarev in Teploenergetika Nr 9, 1957. After modernisation the pressure in the regulating stage chamber was much lower than before at the same discharge rate. Modernisation of the turbine increased the efficiency by only $2\frac{1}{2}$ - 3%, but this article shows that if the effects of a number of secondary factors are excluded the increase in efficiency should be of the expected order of $8\frac{1}{2}$%. The defects are mainly that the outlet angles from the guide vanes are not of the designed values, which gives rise to high losses in steam distribution and excessive drop in the regulated stage.

Card 2/3

SOV/96-58-8-3/22

The Modernisation of Turbine VR-25-1 of the Khar'kov Turbine
Works, and Analysis of the Results obtained.

Contrary to the conclusion of the previous article, the
full efficiency of the new blading would be realised if
the small errors in angle were eliminated.

There are: 1 fig, 2 tables and 1 Soviet literature
reference.

ASSOCIATION: Khar'kovskiy turbinnyy zavod (Khar'kov Turbine Works)

Card 3/3

1. Turbines--Design   2. Turbines--Analysis   3. Turbine blades
--Test methods

5(3)   SOV/80-32-4-27/47

AUTHORS: Gavurina, R.K., Medvedeva, P.A., Yanovskaya, Sh.G. and Granova, Z.A.

TITLE: The Polymerization of Styrene in the Presence of 1-Oxy-1'-
            hydroperoxide-dicyclohexylperoxide and Cobalt Naphthenate (Polimeri-
            zatsiya stirola v prisutstvii 1-oksi-1'-gidroperekisiditsiklogeksil-
            perekisi i naftenata kobal'ta)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 857-863 (USSR)

ABSTRACT: The polymerization of styrene was studied by a number of investigators
            in particular by Dolgoplosk and Tinyakov /Refs 7, 8/. The study of
            this process in the presence of the agents cited in the title
            presents a special interest because of its wide application in the
            technology of copolymerization of unsaturated polyester resins. The
            investigation of the kinetics of styrene polymerization was conducted
            by the authors by means of the dilatometric method and by polyme-
            rization in ampoules, in case of high conversion. Nitrogen, puri-
            fied from oxygen, served as a medium. Three series of experiments
            at temperatures of 25; 38.4 and 56.4°C were carried out while
            applying the method of polymerization in dilatometers. Kinetic
            curves obtained in these experiments are shown in Figures 1 - 3.
Card 1/3   The study of kinetic curves at higher conversions was carried out

SOV/80-32-4-27/47

The Polymerization of Styrene in the Presence of 1-Oxy-1'-hydroperoxide-dicyclohexylperoxide and Cobalt Naphthenate

at a temperature of $38.4^\circ C$. Conclusions drawn from these experiments are as follows: 1. The system consisting of 1-oxy-1'-hydroperoxide-dicyclohexylperoxide and cobalt naphthenate manifests its activity in styrene polymerization at low temperatures, 25 to $56^\circ C$; 2. The introduction of cobalt naphthenate leads to an increase in the initial polymerization rate, R_0. With increasing cobalt concentration, $[Co]$, R_0 also increases. The functional relationship between R_0 and $[Co]^{\frac{1}{2}}$ is linear. With polymerization progressing, its rate is noticeably reduced, which is more pronounced at the higher concentration of cobalt naphthenate; 3. The characteristic viscosity of solutions of the polymers obtained, η, decreases in the region of low conversions but sharply increases in the region of high con-

Card 2/3

versions, when cobalt naphthenate is added. With increasing concen-

SOV/80-32-4-27/47

The Polymerization of Styrene in the Presence of 1-Oxy-1'-hydroperoxide-dicyclohexylperoxide and Cobalt Naphthenate

tration of cobalt naphthenate, η also rises.
There are 7 graphs, 3 tables and 14 references, 2 of which are Soviet, 3 German, 8 English and 1 Japanese.

SUBMITTED: January 31, 1958

Card 3/3

PROCESSES AND PROPERTIES INDEX

Measurements of low vapor pressure. IV. Vapor pressure of dibasic saturated acids. A. Cirasovskaya (Inst. Met., Moscow). J. Phys. Chem. (U.S.S.R.) 21, 987-8(1947)(in Russian); cf. Silberman-Ciranovskaya, C.A. 36, 380[7].—Vapor pressures were detd. from the rate of flow of the vapor through a small hole into a vacuum. Values in mm. Hg at 15.5°, 35.7°, and 47.0° are: oxalic acid 0.00031, 0.00203, and 0.00780; malonic acid 0.00109, 0.00404, and 0.01871; succinic acid 0.003225, 0.00696, and 0.03217; glutaric acid 0.01645, 0.04434, and 0.11406; and adipic acid 0.07272, 0.14404, and 0.39606. The vapor pressure increases with the mol. wt.   J. J. B.

A18-1LA   METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

16

*316. Determination of Low Vapor Pressures at High Temperatures. 1. Vapor Pressure of Bismuth. (In Russian.) A. Granovskaya and A. Lyubimov, Zhurnal Fizicheskoi Khimii (Journal of Physical Chemistry), v. 22, Jan. 1948, p. 103-106.

Describes new apparatus developed for the above and presents data for bismuth in the range 450-700°C., by means of charts and tables.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GRANOVSKAYA, A.   67T23

USSR/Chemistry - Tin   Apr 1948
       Chemistry - Vapor Pressure

"Measurement of Small Vapor Pressures at High
Temperatures: II, Vapor Pressure of Tin," A.
Granovskaya, A. Lyubimov, Chair of Gen Chem, Chair of
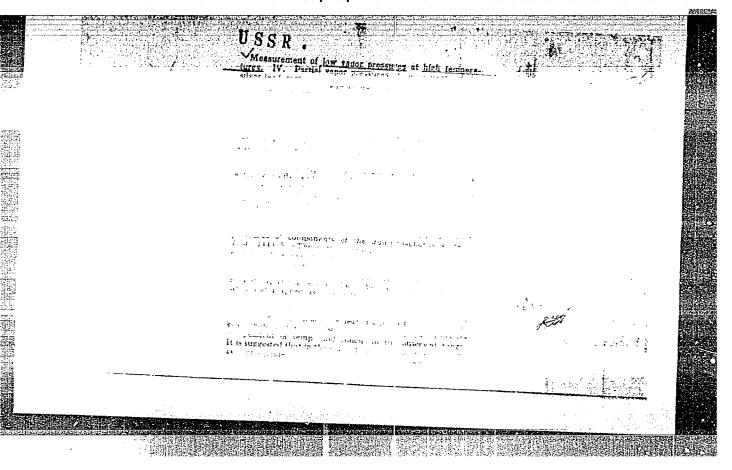Phys, Moscow Inst of Steel, 2 pp

"Zhur Fiz Khim" Vol XXII, No 4 -p 527-8

Previous work was on studies conducted on the pres-
sure of tin vapor at low temperatures. Use same
method here to measure tin vapor pressure in the range
of 730 - 950° C. Tabulate results obtained. Sub-
mitted 22 Jul 1947.

                                              67T23

GRANOVSKAYA, A. A.

Hydrocarbons

Determining vapor pressure of normal hydrocarbons. Vest. Mosk. uh. no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, __December__ 1956, Uncl.

USSR/Chemistry - Isotopes   Apr 53

"Determination of Low Vapor Pressures at High Temperatures. III. Measurement of the Vapor Pressure of Silver With the Application of a Radioactive Isotope," A. P. Lyubimov, A. A. Granovskaya, Inst of Steel im I. V. Stalin, Moscow

Zhur Fiz Khim, Vol 27, No 4, pp 473-475

Measured the vaper pressure of silver at 1037-1567°C with the aid of radioactive Ag 110. Point out the advantages of the method of radioactive isotopes for the detn of low partial pressures.

270T19

USSR .

Measurement of low vapor pressures at high tempera-
tures. IV. Partial vapor pressures

GRANOVSKAYA, A.A.; LYUBIMOV, A.P.

Measuring small vapor pressures at high temperatures. Part 5. Partial vapor pressures of components in the system iron - phosphorus. Zhur.fiz.khim. 27 no.10:1443-1445 O '53.   (MLRA 6:12)

1. Institut stali im. I.V.Stalina, Moscow.
        (Vapor pressure) (Iron) (Phosphorus)

GRANOVSKAYA, A.A., dotsent; LYUBIMOV, A.P., professor, doktor tekhnicheskikh nauk.

Investigation of thermodynamic properties of binary melts using radioactive isotopes. Sbor.Inst.stali no.32:79-96 '54.

(MLRA 10:5)

1.Kafedra obshchey khimii i fiziki.
(Systems (Chemistry))
(Radioistopes)

GRANOVSKAYA, A. A.; LYUBIMOV, A. P. (Prof., Ph.D.)

"Investigation of the Thermodynamic Properties of Components in a Liquid Iron-Chromium System," in book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy 1955.

Prof. A. P. LYUBIMOV, Ph. D.; A. A. GRANOVSKAYA, Assistant, Chair ofGeneral Chemistry, Moscow Inst. of Steel im I. V. Stalin.

GRANOVSKAYA, A.A., detsent, kandidat khimicheskikh nauk; LYUBIMOV, A.P., prefesser, dekter tekhnicheskikh mauk.

Investigating the thermodynamic preperties of the censtituents of iron-sulfur and iron-silicen systems in the liquid state. Sber.Inst.stali 34: 66-90 '55.   (MIRA 9:7)

1.Kafedra ebshchey khimii i kafedra fiziki.
(Iron-silicen alleys) (Systems (Chemistry))

LYUBIMOV, A.P., professor, dokter tekhnicheskikh nauk; GRANOVSKAYA, A.A.,
    dotsent, kandidat khimicheskikh nauk.

    Investigating the thermodynamic properties of the constituents of iron-
    chromium systems in the liquid state. Sber.Inst.stali 34:95-101 '55.
                                                                    (MIRA 9:7)

    1.Kafedra fiziki i Kafedra obshchey khimii.
    (Iron-chromium alloys) (Chromium-isotopes)

SOV/163-58-1-2/53

AUTHORS: Lyubimov, A. P., Granovskaya, A. A., Berenshteyn, L. Ye.

TITLE: The Investigation of the Ternary System Fe-Cr-Ni in Liquid
               State (Issledovaniye troynoy sistemy Fe-Cr-Ni v zhidkom
               sostoyanii)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958,
               Nr 1, pp. 7-10 (USSR)

ABSTRACT: In the present paper the influence of the composition of the
               liquid phase on the evaporation rate of the components in
               the ternary melt Fe-Cr-Ni was investigated. In this inves-
               tigation the composition of the vapor phase was determined
               in relation to the concentrations of the components in the
               melt as well as to the temperature. The investigations in
               the melt Fe-Cr-Ni were divided into wider concentration ranges,
               viz. for iron and nickel from 0 to 100 % and for chromium
               from 0 to 35 %.
               The composition of the vapor phase was determined in an appa-
               ratus especially constructed for this purpose.
               All investigations were carried out at temperatures of
Card 1/2 $1633°$, $1681°$ and $1737°C$.

SOV/163-58-1-2/53

The Investigation of the Ternary System Fe-Cr-Ni in Liquid State

The experimental results showed that the ternary system Fe-Cr-Ni represents an ideal solution between the components.
It was found that a decrease of the nickel content in the vapor phase occurs when it is decreased in the melt. The chromium content in the vapor phase increases according to the decrease of the nickel content in the melt.
The ternary system Fe-Cr-Ni did not show any considerable deviation from the ideal solution up to a temperature of 1737°.
There are 4 figures and 2 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy institut stali
(Moscow Steel Institute)

SUBMITTED: October 8, 1957

Card 2/2

SOV/76-32-7-21/45

AUTHORS: Lyubimov, A. P., Granovskaya, A. A., Berenshteyn, L. Ye.

TITLE: The Investigation of the Thermodynamic Properties of the
              Binary System Iron-Manganese in Solid State (Issledovaniye
              termodinamicheskikh svoystv dvoynoy sistemy zhelezo-mar-
              ganets v tverdom sostoyanii)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 7, pp.1591-1596
              (USSR)

ABSTRACT: In the investigations the authors employed the method of
              open surface evaporation with the calculations of the partial
              vapor pressures being carried out according to the Langmuir
              formula. It was found that the partial pressure may be ob-
              tained without a determination of the evaporation surface
              and of the absolute quantity of each component on the basis
              of the equation by Gibbs-Duhem by means of a graphical inte-
              gration. The method described may be employed for the determi-
              nations of the vapor pressure in all concentration intervals,
              except the case that the vapor pressures of the components
Card 1/3   differ by more than an order of 1,5, as in the case of greater

SOV/76-32-7-21/45

The Investigation of the Thermodynamic Properties of the Binary System Iron-Manganese in Solid State

differences of the vapor pressures of the components reliable
results may only be obtained with small concentrations of
the easily volatile components. The determinations were car-
ried out at 1213, 1363 and 1447° with the above mentioned system
using acceptors (platelets on which the condensation took
place); the latter were investigated by spectralanalytical
methods, using standards (the origin of which is described).
As according to the method described it is not possible to
determine the vapor pressure of the pure iron at the tempera-
ture given, this value was taken from publications. The ex-
perimental values obtained for the molar content of the com-
ponents in the vapor phase, the vapor pressure of the compo-
nents as well as the activities and activity coefficients
are given in a table. From the results may be seen that the
system iron-manganese according to its thermodynamic proper-
ties is close to the ideal solution state. The deviations from
the ideal state which are to be observed at lower temperatures
decrease at higher temperatures so that the system may be
called ideal at 1447°. There are 3 figures, 2 tables, and
4 references, 3 of which are Soviet.

Card 2/3

SOV/76-32-7-21/45

The Investigation of the Thermodynamic Properties of the Binary System Iron-Manganese in Solid State

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina
               (Moscow Institute of Steel imeni I. V. Stalin)

SUBMITTED: March 12, 1957

               1. Iron-manganese systems--Thermodynamic properties

Card 3/3

VASIL'YEVA, Z.G.; GRANOVSKAYA, A.A.; MAKARYCHEVA, Ye.P. TAPEROVA,
A.A.; FRIDENBERG, Ye.E.; DANILEVICH, T.A., red.

[Laboratory work in general chemistry; semimicro analysis]
Laboratornyi praktikum po obshchei khimii; polumikrometod.
2. izd. Moskva, Khimiia, 1965. 346 p.   (MIRA 18:7)

L 39645-66   EWT(m)/EPC(f)   DS/RM/GD-2

ACC NR: AP6002898   (A)   SOURCE CODE: UR/0286/65/000/024/0057/0057

INVENTOR: Laskorin, B. N.; Smirnova, N. M.; Granovskaya, A. D.

ORG: none

TITLE: Method of manufacturing ion exchange materials. Class 29, no. 177030

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 57

TOPIC TAGS: ion exchange, synthetic fiber, textile, graft copolymer, polymer, chlorine, vinyl chloride, amine, copolymer

ABSTRACT: The method of manufacturing ion exchange materials (textiles, fibers) by grafting another polymer to the initial polymer is characterized by the fact that chlorine-containing fibers and textiles such as chlorine or vinylidene chloride and vinyl chloride copolymers are used as the initial polymer, and polyethylene polyamine or other amino compounds as the second (added) polymer in order to improve the quality and increase the assortment of ion exchange materials.

SUB CODE: 11,20/ SUBM DATE: 23Apr62

Card 1/1

GORDEYEV, G.S., prof.; YAKUSHKIN, D.I.. Prinimali uchastiye: GORSKAYA, N.V.;
    GRANOVSKAYA, A.Ye,; YEVSTIGNEYEVA, Yu.G.; KRYLOV, M.V.; LEYKIN, D.I.;
    MAKHOVETSKIY, V.B.; MEYENDORF, A.L.; NAZARENKO, V.I.; NICHIPORUK,
    O.K.; PAVLOV, L.I.; RUMYANTSEVA, N.V.; SOSENSKIY, I.I.; CHERNEVSKIY,
    Yu.V.; TULUPNIKOV, A.I., red.; SOLOV'YEV, A.V., prof., red.;
    RAKITINA, Ye.D., red.; ZUBRILINA, Z.P., tekhn.red.

[Agriculture in capitalist countries; a statistical manual] Sel'skoe
khoziaistvo kapitalisticheskikh stran; statisitcheskii sbornik.
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 247 p.   (MIRA 12:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki
sel'skogo khozyayastva. 2. Otdel nauchnoy informatsii po ekonomike i
organizatsii sel'skogo khozyayastva zarubezhnykh stran Vsesoyuznogo
nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva
(for all except Tulupnikov, Solov'yev, Rakitina, Zubrilina). 3.
Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki
sel'skogo khozyaystva (for Tulupnikov). 4. Zamestitel' direktora
Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo
khozyaystva (for Solov'yev).
                    (Agriculture--Statistics)

GALKIN, G.V.; GRANOVSKAYA, A.Yu.; MAKVETSOV, Ye.N.; SPIGLAZOV,
    Ye.F.; RYAZANKIN, V.N., red.; MAKAROV, M.S., red.

[Punched-card computing machines: P80-5, P80-6, PA80-2
perforators, K80-6, K45-6, KA80-2 controllers, and S80-5,
S45-5, S80-5M, S45-5M sorting units] Schetno-perforatsion-
nye mashiny; perforatory P80-5, P80-6, PA80-2, kontrol'niki
K80-6, K45-6, KA80-2 i sortirovki S80-5, S45-5, S80-5M,
S45-5M. Moskva, Statistika, 1965. 207 p.   (MIRA 18:9)

GRANOVSKAYA, E. L.

   "Adaptive Variations in the Phosphate Content of the Muscles."
Cand Med Sci, Odessa, 1953.   (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

USSR / Human and Animal Physiology. Vessels.   T

Abs Jour   : Rof Zhur - Biol., No 15, 1958, No. 70194

Author   : Granovskaya, E. L.
Inst   : Ukrainian Scientific Research Institute of Clinical
              Medicine
Title   : Venous Pressure in Patients with Chronic Hepatitis of
              Various Etiologies

Orig Pub   : Materialy po obmeny nauchn. inform. Ukr. n.-i, in-t
              klinich. meditsiny, 1957, No 1, 65-68

Abstract   : No abstract given

Card 1/1

DZYAK, V.N., prof.; DROBACHEVSKAYA, A.A.; GHANOVSKAYA, E.V.

Some types of therapy in chronic coronary insufficiency.
Vrach. delo no.7:26-30 Jl'63.   (MIRA 16:10)

1. Kafedra gospital'noy terapii II (zav. - prof. V.N.Dzyak)
Dnepropetrovskogo meditsinskogo instituta i dorozhnaya
bol'nitsa.
          (CORONARY HEART DISEASE)

LEVINTOV, Genekh Davidovich; GRANOVSKAYA, I.E., red.; BABICHEVA, V.V., tekhn.red.

[Consumers guide to radio receivers] Pokupateliu o radiopriem-
nikakh. Moskva, Gos.izd-vo torg.lit-ry, 1960. 81 p.
      (Radio--Receivers and reception)   (MIRA 13:7)

PALLADOV, Sergey Semenovich; KHOROSHEV, Nikita Ivanovich; GRANOVSKAYA,
      I.E., redaktor; SUDAK, D.M., tekhnicheskiy redaktor

      [Commercial guide to textile fabrics] Tovarovedenie tekstil'nykh
      tovarov. Moskva, Gos. izd-vo torgovoi lit-ry, 1955. 192 p.
            (Textile fabrics)   (MIRA 8:7)

GRANOVSKAYA, I.E.

ZAMKOVSKIY, Dmitriy Yakovlevich; VINOGRADSKIY, Boris Nikolayevich;
     GRANOVSKAYA, I.E., redaktor; SUDAK, D.M., tekhnicheskiy redaktor

     [Clothing; a handbook] Shveinye tovary; spravochnoe posobie. Mo-
     skva, Gos. izd-vo torgovoi lit-ry, 1956. 206 p.   (MIRA 10:4)
               (Clothing and dress--Marketing)

LOPATKIN, V.G., dotsent, kand.ekonom.nauk, red.; LYUDSKOV, B.P., red.;
ISHKOVA, A.K., red.; KAGANOVA, A.A., red.; CHERVYAKOVA, L.S.,
red.; GRANOVSKAYA, I.B., red.; MEDRISH, D.M., tekhn.red.

[Collected scientific works] Sbornik nauchnykh rabot. Pod red.
V.G.Lopatkina. Moskva, Gos.izd-vo torg.lit-ry, 1956. 240 p.
                                                        (MIRA 14:2)

1. Moscow. Nauchno-issledovatel'skiy institut torgovli i obshche-
stvennogo pitaniya.
                (Food industry)

SMIRNOV, Vasiliy Stepanovich, prof., doktor tekhn.nauk, zasluzhennyy
    deyatel' nauki i tekhniki [deceased]; GRANOVSKAYA, I.E., red.;
    SUDAK, D.M., tekhn.red.

[Standardized specifications of grain products] Tovarovedenie
zernomuchnykh tovarov. Moskva, Gos.izd-vo torg.lit-ry, 1959.
368 p.   (MIRA 12:11)
                    (Cereal products)

KHOMUTOV, Boris Izotovich; GRANOVSKAYA, I.E., red.; SINEL'NIKOVA, TS.B.,
  red.; BABICHEVA, V.V., tekhn.red.

[Science of food commodities] Tovarovedenie prodovol'stvennykh
tovarov. Moskva, Gos.izd-vo torg.lit-ry, 1960. 230 p.
                                                  (MIRA 13:3)
                (Food)

LYUBICH, Mikhail Galileyevich; GRANOVSKAYA, I.B., red.; MEDRISH, D.M., tekhn.red.

[Footwear manufacture and materials] Tovarovedenie obuvi. Moskva, Gos.izd-vo torg.lit-ry, 1960.   344 p.

(MIRA 13:11)

(Boots and shoes)

RUKOSUYEV, Andrey Nikolayevich; GRANOVSKAYA, I.E., red.; MEDRISH, D.M.,
    tekhn.red.

    [Introduction to the science of food commodities; grain and
    flour products] Vvedenie v tovarovedenie prodovol'stvennykh
    tovarov; zernomuchnye tovary. Moskva, Gos.izd-vo torg.lit-ry.
    1960. 391 p.   (MIRA 14:4)
                   (Cereal products)

USATYUK, Maksim Klement'yevich; GRANOVSKAYA, I.E., red.; VASILEVSKAYA,
        I.V., tekhn.red.

    [Storing vegetables] Opyt khraneniia ovoshchei. Moskva, Gos.
    izd-vo torg.lit-ry, 1961. 85 p.   (MIRA 14:6)
                (Vegetables—Storage)

USATYUK, Maksim Kliment'yevich; GRANOVSKAYA, I.E., red.; EL'KINA, E.M.,
    tekhn. red.

[Manual for fruit and vegetable growers; salting, fermenting,
pickling and other methods of processing vegetables, fruits,
and mushrooms] Spravochnik plodoovoshchnika; po voprosam soleniia,
kvasheniia, marinovaniia i drugikh vidov pererabotki oboshchei,
plodov i gribov. Moskva, Gos. izd-vo torg. lit-ry, 1961. 214 p.
                                         (MIRA 14:7)
    (Fruit—Preservation) (Vegetables—Preservation) (Mushrooms—
                                                Preservation)

INIKHOV, G.S., prof.; GABRIEL'YANTS, M.A., dots.; MAKAREYEV, M.A.;
    SUKHANOVA, Ye.Yu., kand. tekhn. nauk; GRANOVSKAYA, I.E., red.;
    EL'KINA, E.M., tekhn. red.

[Guide to food products; milk, fat, eggs, meat, and fish goods]
Tovarovedenie prodovol'stvennykh tovarov; tovary molochnye zhi-
rovye, iaichnye miasnye, rybnye. Izd.2., perer. Moskva, Gos-
torgizdat, 1961. 383 p.   (MIRA 15:1)
            (Food industry)

VITKOVSKIY, V.G.; GRANOVSKAYA, I.E., red.; GROMOV, A.S., tekhn. red.

    [Storage of apples and grapes]Khranenie iablok i vinograda.
Moskva, Gostorgizdat, 1961. 34 p.   (MIRA 15:10)
  (Apple--Storage)   (Grapes--Storage)

GRANOVSKAYA, I.I.

DMITRIYEVSKIY, Semen Petrovich; VASIL'YEV, A.I., redaktor; GRANOVSKAYA, I.I., redaktor; ROSLOV, G.I., tekhnicheskiy redaktor

[Pickling and preserving cabbage] Kvashenie i khranenie kapusty. Pod red. A.I.Vasil'eva. Moskva, Gos.izd-vo torg.lit-ry, 1956. 52 p. (Cabbage--Preservation)   (MLRA 10:10)

GRANOVSKAYA, I.R. , inzh.; FOGEL', V.O., dotsent

Devices for heating high-temperature liquid heat carriers. Prom.
energ. 18 no.11:22-26 N '63.   (MIRA 16:12)

L 15701-65   EWT(m)/EPF(c)/T   Pr-4   ASD-7/AFFTC/APGC/AEDC(a)/SSD/RSD/
    f -?/AS(mp)-?/ACD(p)-3   Bw/GJ/WS

ACCESSION NR: AP4047529   S/0094/64/000/010/0033/0037

AUTHOR: Fogel', V. O. (Candidate of technical sciences), Granovskaya, I. R.
    (er)

TITLE: Using aromatized petroleum oils as a high-temperature heat carrier

SOURCE: Promy*shlennaya energetika, no. 10, 1964, 33-37

TOPIC TAGS: heat carrier, heat transfer, petroleum oil / AMT-300
petroleum oil

ABSTRACT: The experimentally determined thermophysical characteristics of
    AMT-300 petroleum oil and American M600 ("Mobiltherm") are
tabulated. the characteristics of both oils are very close except for the vapor
    (lower with AMT-300) and the congelation point (-30C for AMT-300 and
    for M600). The thermal stability of both oils was tested by residual-gas
pressure in a flask with heated oil; at temperatures under 320C, the stability of
AMT-300 oil was found to be somewhat higher than that of M600. Further
experiments involved circulating the oil through a closed tubing circuit for 750 hrs

Card 1/2

L 15701-65

ACCESSION NR: AP4047529

3

at 300, 315, and 330C. It was found that during the first 100 hrs, the heat-transfer factors considerably decreased due to formation of a carbon-film deposit the inside of the tubing. The coking value, resin content, and viscosity were ... at various stages of the experiment the deposit thickness was 0.04 and ... for AMT-300 and M600 oils, respectively. The authors' conclusions are (1) AMT-300 is equivalent to or has an advantage over M600; (2) AMT-300 may be used as a heat-transfer agent at 200–315C in industrial installations. Orig. art. has: 2 figures, 9 formulas, and 3 tables.

ASSOCIATION: Moskovskiy aviatsionny*y institut (Moscow Aviation Institute); ... kiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Fine Chemical Engineering).

SUBMITTED: 00   ENCL: 00

SUB CODE: FP, TD   NO REF SOV: 001   OTHER: 000

Card 2/2

GRANOVSKAYA, L.M.

NAUMOV, A.L.; NAZAROV, A.A.,professor, otvetstvennyy redaktor;
GRANOVSKAYA, L.M.,redaktor; KHOKHANOVSKAYA, T.I.,tekhnicheskiy
redaktor

[Theoretical mechanics] Teoreticheskaia mekhanika. Kiev, Izd-
vo Kievskogo gos. univ. im. T.G. Shevchenko. Pt. 1. [Mechanics
of particles and the free system of particles] Mekhanika
chastitsy i svobodnoi sistemy chastits. 1957. 305 p.
(MLRA 10:5)

(Mechanics)

NAUMOV, Adol'f L'vovich; GRANOVSKAYA, L.M., red.; KHOKHANOVSKAYA, T.I.,
tekhred.

[Theoretical mechanics] Teoreticheskaia mekhanika. Pt.2.
[Mechanics of systems with restricted motion; Absolutely solid
bodies] Mekhanika nesvobodnoi sistemy; Absoliutno tverdoe telo.
Izd-vo Kievskogo gos.univ.im. T.G.Shevchenko. 1958. 316 p.
(MIRA 12:4)

(Mechanics)   (Solids)

PIONTKOVSKIY, Bronislav Aleksandrovich; SERYAKOV, Nikolay Ivanovich;
    SAVEL'YEV, V.M., otv. red.; GRINOVSKAYA, M.A., red.

    [Electric power supply of wire broadcasting enterprises]
    Elektropitanie predpriiatii provodnoi sviazi. Moskva, Izd-
    vo "Sviaz'," 1964.   591 p.   (MIRA 17:4)

GRANOVSKAYA, M.L.; GRINEV, V.S.; DUZHENKOVA, N.A.; KRUSHINSKAYA, N.P.;
        SAVICH, A.V.

    Determination of yields of the radiochemical decomposition of
    tryptophan and guanine by means of mathematical analysis of the
    absorption spectra of solutions. Radiobiologiia 5 no.5:633-
    637 '65.   (MIRA 18:11)

GRANOVSKAYA, M.N.

Automatization of flame furnaces in nonferrous metallurgy. TSvet.
met. 29 no.6:44-46 Je '56.   (MIRA 9:9)
(Nonferrous metals--Metallurgy) (Smelting furnaces) (Automatic
                                                    control)

GRANOVSKAYA, M. N.

PA 38/49T102

USSR/Petroleum Industry   Dec 48
        Boilers
        Regulators

"Automatic Feed Regulation of Steam Boilers in the Power Economy of the Petroleum Industry," M. N. Granovskaya, Orgenergoneft', 5 pp

"Energet Byul" No 12

Censures boiler-construction industry because new power plants are still designed without automatic boilers. States that in the oil industry of eastern regions, automatic supply is operating only in Buguruslan, Gur'yev, Orsk, and Kulsarakh, in short,
38/49T102

USSR/Petroleum Industry (Contd)   Dec 48

only on a few boilers out of several hundred, even though it has been shown that supply regulators lower expenditures on labor, fuel, and maintenance. Also, suggests various type regulators.

38/49T102

USSR/Petroleum - Fuel Resources   Aug 49
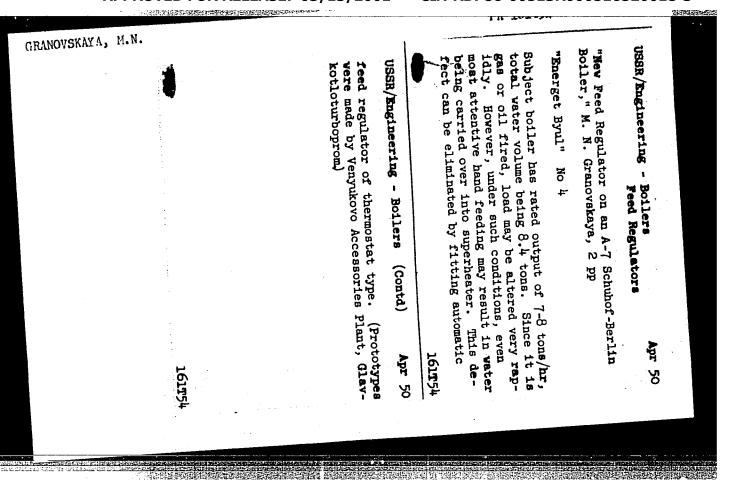   Efficiency, Industrial

"Measures on Fuel Economy Taken by Petroleum
Refineries," M. N. Granovskaya, S. Shmovanov, $3\frac{1}{2}$ pp

"Energet Byul" No 8

Subject measures can be divided into two basic groups:
(1) for increasing efficiency of equipment, and
(2) for using secondary energy resources. Gives
figures showing advantages of each method.

2/50T100

GRANOVSKAYA, M.N.

USSR/Engineering - Boilers   Apr 50
                    Feed Regulators

"New Feed Regulator on an A-7 Schuhof-Berlin
Boiler," M. N. Granovskaya, 2 pp

"Energet Byul" No 4

Subject boiler has rated output of 7-8 tons/hr,
total water volume being 8.4 tons. Since it is
gas or oil fired, load may be altered very rap-
idly. However, under such conditions, even
most attentive hand feeding may result in water
being carried over into superheater. This de-
fect can be eliminated by fitting automatic

                                              161T54

USSR/Engineering - Boilers (Contd)   Apr 50

feed regulator of thermostat type. (Prototypes
were made by Venyukovo Accessories Plant, Glav-
kotloturboprom)

                          161T54

GRANOVSKAYA, M.N.

"Automatic Controls for Feeding of Industrial Steam Boilers."
Rab.energ.2 no. 5 (1952)

Monthly List of Russian Accessions, Library of Congress, Aug '52, Unclassified.

EXCERPTA MEDICA Sec.14 Vol.11/7 Radiology Jul 57.

1195. GRANOVSKAYA N.N. Centr. Inst. of Roentgenol. and Radiol., Leningrad. * The penetration of normal and damaged skin by radioactive phosphorus (Russian text) VESTN. RENTGENOL. RADIOL. 1956, 3 (7-11) Illus. 3

Radioactive phosphorus (P^{32}) in the form of an aqueous solution of the dibasic sodium phosphate or in a lanoline ointment was applied to the skin of experimental animals (24 rabbits and 3 piglets). The permeability of the skin was assesses in the terms of the concentration of P^{32} in the blood and bone tissue of the animals. It was found that after the exposure of P^{32} to β-radiation the permeability of the skin to it increases. The degree of permeability increases with the degree of radioactivity of substances used. Application of P^{32} in the amount of 12.5 mc. per sq. cm. of the skin of the rabbit resulted in the appearance of P^{32} in the blood of the animal 9-14 days later. When the amount used was 25 mc. the substance appeared in the blood 2-4 hr. later. The epidermis was found to be the main barrier. Application of P^{32} in the amount of 2.5 mc. per sq. cm. of the skin deprived of epidermis, gave rise to the appearance of P^{32} in the blood in 2 hr. and in greater concentration than in the series of experiments with the skin undamaged. References 12.

Nevskaya - Moscow

GRANOVSKAYA, N.N.; SAKHAROVA, V.M.

Calcified uni-camerate echinococcosis of the femur. Vest. rent.
i rad. 38 no.5:70 S-O'63
                                          (MIRA 16:12)

1. Iz kafedry rentgenologii i radiologii Krymskogo meditsin-
skogo instituta i rentgenovskogo otdeleniya Krymskoy oblast-
noy bol'nitsy.

AKHMEDLI, M.K.; GRANOVSKAYA, P.B.; ZHIROVA, L.F.

Photometric detection of magnesium in alunite rocks. Uch. zap. AGU
no.3:27-33 '55.
      (Magnesium) (Alunite) (Photometry)   (MLRA 9:12)

L U7151-67   EWT(m)/EWP(t)/ETI   IJP(c)   JD/JG

ABSTRACT: In order to find the optimum reagent for determining ytterium-subgroup rare earth elements, a quantitative comparison of the spectrophotometric characteristics of 16 different reagents for determining rare earth elements was made by using ytterbium as an example. The following characteristics were considered: (a) $\Delta\lambda$, the difference between the wavelengths of the absorption peaks of the complex λ_{MeR} and reagent λ_{HR}; (b) the relative and (c) the absolute difference between the molar extinction coefficients of the complex E_{MeR} and reagent E_{HR} at λ_{max} of the complex. The absorption spectra of the molecular and ionic forms of the reagents and their complexes with ytterbium were recorded; the composition of the complexes was determined. The best reagents for the spectrophotometric determination of yttrium group rare earths were found to be arsenazo (III), xylenol orange, stilbazo, methyl thymol blue, and pyrocat-

Card   1/2   UDC: 543.535.243

Card . 2/2

L 30345-66   EWT(m)/FWP(j)   RM/JXT(CZ)

ACC NR: AP6005115   SOURCE CODE: UR/0316/65/000/005/0105/0108

AUTHOR: Akhmedli, M. K.; Granovskaya, P. B.

ORG: Azgosuniversitet im. S. M. Kirova

TITLE: Complexes of ytterbium with certain organic reagents

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5, 1965, 105-108

TOPIC TAGS: ytterbium compound, complex molecule, spectrophotometric analysis

ABSTRACT: The formation of colored complexes of ytterbium with pyrocatechol violet, arsenazo I and methylthymol blue were studied spectrophotometrically. The absorption maxima of the complexes were respectively 636, 560, and 602 mμ. The photometric determination of ytterbium should be carried out with pyrocatechol violet at pH 7.0, with arsenazo I at pH 8.0, and with methylthymol blue at pH 6.0. The composition of the complexes with all the reagents corresponds to the ratio Yb^{3+}:R = 1:1. The solutions of the complexes closely obey the Bouger-Lambert-Beer law. The calibration curves were plotted and the errors were determined. The study of spectrophotometric characteristics showed that of the three reagents studied, the best for determining ytterbium is methylthymol blue. Orig. art. has: 3 figures and 1 table.

SUB CODE: 07 / SUBM DATE: 08Jun64 / ORIG REF: 011 / OTH REF: 006

Card 1/1

Country : USSR
Category: Human and Animal Morphology (Normal and Pathological).
          Nervous System. Peripheral Nervous System.

Abs Jour: RZhBiol., No 2 1959, No.7528

Author : Granovskaya, P.B.
Inst   : -
Title : Materials on a Study of Reactive Properties of Peri-
         pheral Nervous System of the Tongue.

Orig Pub: V sb : Nekotoryye voprosy morfol., fiziol i patol.
          organov pishchevareniya. M., Medgiz, 1956, 65-72

Abstract: In 28 dogs, cats and rabbits, 1-45 days after rough
          massage of the stomach or introduction of 0.5-3 ml
          of 20% solution of hydrochloric acid into the region
          of its greater curvature, the changes of the nerve

Card   : 1/2

S

Country : USSR

Category: Human and Animal Morphology (Normal and Pathological).
Nervous System. Peripheral Nervous System.

S

Abs Jour: RZhBiol , No 2. 1959, No 7528

elements of the tongue were discovered. The normal
structure of its epithelial, connective and muscular
tissues was not disturbed. The most expressed changes
of nerve elements (from the appearance of irritation
to degeneration and disintegration) appeared 7 days
after trauma. At later dates (15-45 days), many
earlier-formed morphologic reactions were subjected
to reverse development. Most labile turned out to
be the terminal regions of myelinated nerve fibers
of the mucous membrane of the tongue radix. In the
tongue of humans who died of carcinoma of the sto-
mach, peculiar reactive changes of nerve elements
were discovered -- Ye. B. Ryzhkov

Card   : 2/2

S-11

AKHMEDLI, M.K.; GRANOVSKAYA, P.B.

Complex of ytterbium with methylthymol blue. Ukr. khim. zhur.
31 no.6:615-618 '65.   (MIRA 18:7)

1. Azerbaydzhanskiy gosudarstvennyy universitet imeni Kirova.

GRANOVSKAYA, P. V., Cand of Med Sci — (diss) "Reactivity Changes in the Peripheral Nervus System of the Skin During a Massage," Dnepropetrovsk, 1959, 14 pp (Dnepropetrovsk Medical Institute) (KL, 2-60, 116)

GRANOVSKAYA, R. A.

GRANOVSKAYA, R. A. -- "Development of Methods of the Technical Calculation of an SHF Triode Oscillator and Their Experimental Testing." Sub 7 Jan 53, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze (Dissertation for the Degree of Candidate in Technical Sciences)

SO: VECHERNAYA MOSKVA, January-December 1952

VOSKRESENSKIY, D.I.; GRANOVSKAYA, R.A.; DERYUGIN, L.N.; NAUMENKO, Ye.D.;
TRUNOVA, N.V.

Delay system of a periodic structure with contactless plates. Izv.
vys.ucheb.zav.; radiotekh. no.4:480-489 Jl-Ag '58.
(MIRA 11:11)

1. Rekomendovana kafedroy radioperedayushchikh ustroystv Moskovskogo
ordena Lenina aviatsionnogo instituta im. Sergo Ordzhonikidze.
(Microwaves)

VOSKRESENSKIY, D.I.; GRANOVSKAYA, R.A.; DERYUGIN, L.N.; NAUMENKO, Ye.D.;
TRUROVA, N.V.

Measuring the coupling resistance of a retarding system with contact-
less plates. Izv.vys.ucheb.zav.; raditekh. no.5:565-572 S-O '58.
(MIRA 12:1)
1. Rekomendovano kafedroy radioperedayushchikh ustroystv Moskovskogo
ordena Lenina aviatsionnogo instituta imeni Sergo Ordzhonikidze.
(Radio measurements)

05203
SOV/142-2-3-11/27

9(2,3,9)

AUTHORS: Voskresenskiy, D.I., Granovskaya, R.A.

TITLE: A Delay System in the Shape of a Grooved Helix

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 3, pp 353-360 (USSR)

ABSTRACT: The author considers a delay system in the shape of a rectangular waveguide of the helical groove type without internal sidewalls. For such a system, he presents an approximated electromagnetic wave propagation theory, calculation methods of phase velocity and coupling resistance. An experimental dispersion curve is given together with the measurement results of the "cold" coupling resistance for one model. The theoretical results were compared with the experimental data obtained from a resonance model of a delay system by the method described by the author in ref.4. The paper was recommended for publication by the Kafedra radioperedayushchikh ustroystv Moskovskogo ordena Lenina aviatsiounogo instituta imeni Sergo Ordzhonikidze (Dep't of Radio Transmitting Equipment of the Moscow Lenin Order-Aviation Institute imeni Sergo Ordzhonikidze). There are 4 graphs, 3 diagrams, 1 block diagram

Card 1/2

05203
SOV/142-2-3-11/27

A Delay System in the Shape of a Grooved Helix

and 6 references, 4 of which are Soviet and 2 American.

SUBMITTED: January 24, 1959

Card 2/2

SOV/142-58-4-14/30

AUTHOR: Voskresenskiy, D.I., Granovskaya, R.A., Deryugin, L.N.,
            Naumenko, Ye.D., Trunova, N.V.

TITLE: A Delay System of Periodic Structure with Non-Contact
            Plates (Zamedlyayushchaya sistema periodicheskoy
            struktury s beskontaktnymi plastinami)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Radiotekhnika,
            1958, Nr 4, pp 480-489 (USSR)

ABSTRACT: The paper discusses a delay system consisting of two
            rows of symmetrically placed plates which have no
            contact with the walls arranged in the form of a right-
            angled waveguide. This system is intended for a
            travelling-wave tube with additional acceleration of
            the electrons by permanent fields in interaction space.
            The effects of the system's dimensions on its electro-
            dynamic characteristics are analyzed and a method of
            "cold" measurement of their dispersion curves described.
            Experimental dispersion curves for some models of the
Card 1/3   system are adduced. As theoretical analysis of the

A Delay System of Periodic Structure with Non-Contact Plates

electrodynamic parameters is complicated by
their   geometrical complexity, special attention is
paid to the experimental investigation of this system.
For all the models studied a change in retardation
from 4 to 7 corresponds to a relative frequency band
of 10% - 15% and a displacement of the nodal plane of
roughly 10% from the total height of the plate h. The
coupling impedance at the axis in this deceleration
interval is 10 - 30 ohm. Maximum coupling impedance
is relatively small and does not go below 20 ohm.
Maximum possible retardation (γ max) in the system
is determined by the general formula:

$$\gamma\, max = \tfrac{1}{2}\,\frac{\lambda}{T}$$

The resonance method was used to measure the retard-
ation. The measuring method is accurately described
as well as the results of experimental investigation.
The frequency band, corresponding to the variation in
retardation from 4 to 7 has the same order of magni-
tude as in corresponding three channel systems.

Card 2/3

A Delay System of Periodic Structure with Non-Contact Plates   SOV/142-58-4-14/30

There are 7 graphs, 1 block diagram, 1 schematic diagram, 1 table, 1 photograph and 3 Soviet references.

ASSOCIATION: Kafedra radioperedayushchikh ustroystv Moskovskogo ordena Lenina aviatsionnogo instituta imeni Sergo Ordzhonikidze   (Chair   of Radio Transmitting Equip-ment, Moscow, Order of Lenin Aviation Institute imeni Sergo Ordzhonikidze)

SUBMITTED: March 17, 1958

Card 3/3

9(3)
AUTHORS:

Voskresenskiy, D.I., Granovskaya, R.A., Deryugin, L.N., Naumenko, Ye.D., and Trunova, N.V.

TITLE:
Measuring of Coupling Resistances of a Retardation System with Non-Contacting Plates
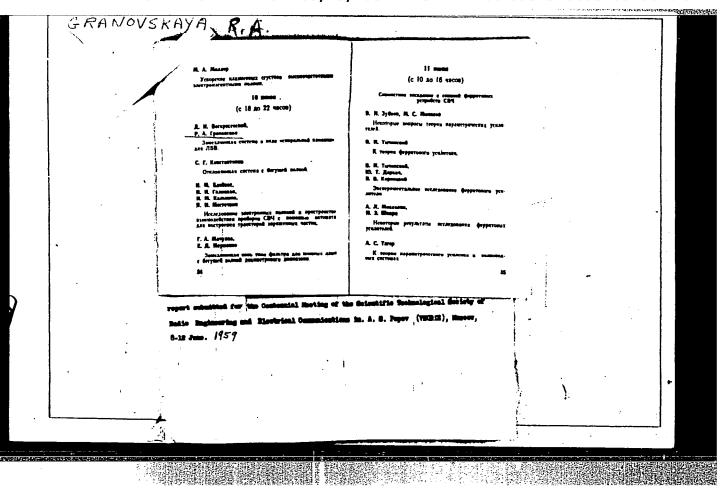
PERIODICAL:

ABSTRACT:

The authors describe methods to determine coupling resistances of a periodic retardation system with non-contacting plates. For measuring, the method of "absorbing switching-in" is used, which measures the change of durability of the resonance dummy with a retarding system. It starts with bringing a small absorbing element into the resonator (Fig.1). By experiments, it was found, that the presence of four metal tie plates, arranged symetrically within the knots of an electric field (Fig.5 and 6), did not change the characteristics of the system. Neither did displacing the tie plates from the knots over a distance of ± 15 mm lead to a conpsiderable change of characteristics. The article is recommended by

Card 1/2

GRANOVSKAYA, R. A.

М. А. Миллер

Ускорение плазменных сгустков высокочастотным электромагнитным полем.

10 июня
(с 18 до 22 часов)

Д. М. Вострокнутов,
Р. А. Грановская

Замедляющие системы в виде спиральной линии для ЛБВ.

С. Г. Константинов

Отклоняющая система с бегущей волной.

Н. Н. Лейбов,
В. М. Галицкая,
В. М. Калинина,
В. В. Мостовая

Исследование электронных пучков в приборах взаимодействия приборов СВЧ с помощью автоматов для построения траекторий заряженных частиц.

Г. А. Кочурова,
Е. А. Корнилова

Замедляющие цепь типа фильтра для ламп с бегущей волной дециметрового диапазона.

84

11 июня
(с 10 до 16 часов)

Совместное заседание с секцией ферритовых устройств СВЧ

Б. Н. Зубков, М. С. Яковлев

Некоторые вопросы теории параметрических усилителей.

В. М. Тихонский

К теории ферритового усилителя.

В. М. Тихонский,
Ю. Т. Ларин,
В. В. Корнилов

Экспериментальное исследование ферритового усилителя.

А. Л. Михайлов,
В. А. Шapp

Некоторые результаты исследования ферритовых усилителей.

А. С. Тагер

К теории параметрического усилителя в волноводной системе.

85

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORE), Moscow, 8-12 June. 1959

VOSKRESENSKIY, D.I.; GRANOVSKAYA, R.A.

Delay system in the form of a grooved helix. Izv.vys.ucheb.
zav.; radiotekh. 2 no.3:353-360 My-Je '59.   (MIRA 13:2)

1. Rekomendovana kafedroy radioperedayushchikh ustroystv
Moskovskogo ordena Lenina aviatsionnogo instituta im.Sergo
Ordzhonikidze.
         (Wave guides) (Antennas (Electronics))

9,4230
9.3700

30740

S/535/60/000/125/001/008
E033/E162

AUTHORS: Voskresenskiy, D. I., Granovskaya, R. A., and
            Deryugin, L. N.

TITLE: A method of measurement of the electrical
            characteristics of slow-wave systems having weak
            space-harmonics

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.125, 1960.
            Elektromagnitnyye zamedlyayushchiye sistemy; metodika
            izmereniya elektricheskikh kharakteristik.   5-13.

TEXT: The article examines a method of measuring the
electrical characteristics - the coupling impedance and the
retardation factor - of slow-wave structures when the space
harmonics are negligible in comparison with the fundamental.
This case is termed the "monoharmonic" case and means, physically,
that the periodic structures may be replaced by an equivalent
retarding continuous medium. The electromagnetic field components
in a monoharmonic travelling wave, propagating along the z-axis of
the system, can be written:

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$$\dot{A}_m(x,y)\ e^{jk_z z}$$

where $\dot{A}_m(x,y)$ is the complex amplitude of the corresponding component, depending on the coordinates in the cross-sectional plane of the system, and k_z is the phase constant, which is related to the phase velocity and the wavelength along the system by:

$$v_z = \frac{\omega}{k_z}\ , \qquad \lambda_z = \frac{2\pi}{k_z}$$

By "retardation factor" is meant the ratio of the wave velocity c in free space to the phase velocity v_z in the system.

$$\gamma = \frac{c}{v_z} = \frac{\lambda}{\lambda_z} = \frac{k_z}{k} \tag{1}$$

where λ and k are the free space wavelength and phase constant respectively for the corresponding working frequency.
Experimental determination of the retardation factor by phase

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A method of measurement of the ...   S/535/60/000/125/001/008
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measurements on travelling or standing waves is ruled out by a
number of practical difficulties, and therefore a resonance method
is used. This consists of obtaining dispersion curves by "cold"
measurements on models formed by short-circuiting both ends of
resonant sections of slow-wave systems. The coupling impedance is
determined in the same models by the absorption method.   To
simplify the experimental investigation, the models are scaled up
and lower frequencies used. The section is short-circuited at
both ends by plane metallic walls, thus forming a cavity resonator
in which resonant fields, having the structure of the retarded
waves in cross-section, are excited by suitable coupling elements.
Resonance will occur when the length between the end walls   L   is
given by

$$L = m\lambda_z/2$$

where   m   is an integer. After the model has been tuned to the
particular wave, the dimension   L   is changed by moving one end
wall, and the experimental dependence of the slow-wave length on
the resonant frequency $\lambda_z(f_p)$ is obtained. From this, the
dispersion retardation characteristic:

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A method of measurement of the ...

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$$\gamma(f_p) = \frac{\lambda(f_p)}{\lambda_z(f_p)} \quad \frac{c}{f_p\lambda(f_p)} \qquad (2)$$

may be obtained. To avoid practical difficulties, a fixed length
L may be used and, by changing the excitation frequency, a
discrete number of experimental points on the dispersion
characteristic, which correspond to resonant values $\lambda_z = (2/m)$ L,
may be obtained. The block diagram of the set-up is   shown in
Fig.1. The coupling impedance at a point in the cross-section of
a monoharmonic slow-wave structure is:

$$R = \frac{E_z^2}{2k_z^2 P} \qquad (3)$$

where E_z is the amplitude of the longitudinal component of the
electric field at the point, and P is the power flow of the
wave under consideration. Direct measurement of these quantities
is difficult. A suitable method of experimental determination of
the coupling impedance is by measuring the change in the Q-factor

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A method of measurement of the S/535/6 0/000/125/001/008
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(or in the bandwidth) of the resonant model when a small absorbing body is introduced into it. The coupling impedance is found from:

$$R = \frac{L}{8\pi^2} \left| \frac{d\lambda_z}{df} \right| \frac{E_z^2}{W} \tag{5}$$

where W is the total electromagnetic energy in the section; $d\lambda_z/df$ is found from the dispersion characteristic $\lambda_z = \lambda_z(f)$; and E_z^2 can be measured on the model by:

$$\frac{E_z^2}{W} = \frac{2\pi}{\mu} (\Delta f' - \Delta f) \tag{10}$$

where Δf is the half-power bandwidth with no absorption and $\Delta f'$ is the bandwidth with the absorption body in the model; μ is the absorption coefficient of the body, which can be calculated from its dimensions, orientation, permittivity and permeability, or can be measured experimentally. Measurement accuracies of the order of 10% for the coupling impedance and several percent for the retardation factor are obtainable.

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                                        E133/E162

The practical advantages of the methods described over other
methods are discussed.
There are 1 figure and 3 non-Soviet-bloc references. The English
language references read as follows:
Ref.1: R.L. Sproull, E.G. Linder. Resonant Cavity Measurements,
       PJRE, 1946, Vol.34, No.5, pp.305-312.
Ref.3: E.J. Nalos, Measurement of Circuit Impedance of Periodically
       Loaded Structures by Frequency Perturbation.
       PJRE, 1954, Vol.42, No.10, p.1508.

Card 6/1

30742

S/535/60/000/125/003/008
E133/E162

9.1300

AUTHORS: Voskresenskiy, D.I., and Granovskaya, R.A.

TITLE: Investigation of a rectangular comb in a
                rectangular waveguide

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no. 125, 1960.
                Elektromagnitnyye zamedlyayushchiye sistemy; metodika
                izmereniya elektricheskikh kharakteristik. 35-42

TEXT: In this article the dispersion properties and coupling
impedance of a uniform rectangular "comb" placed in a rectangular
waveguide are investigated by using a resonant model. The block
diagram is shown in Fig.1 and the details of the model are shown in
Fig.2. The comb consists of metal fins 0.0066 a thick, separated
by a period T = 0.05 a, where a is the width of the waveguide.
The length of the model can be varied by changing the number of
fins and moving the short-circuiting piston. To investigate the
dispersion properties, the resonant frequency of the model is
determined for each position of the piston. Those frequencies at
which one semi-wave of the slow-wave ($\lambda_z/2$) occurs (corresponding
to the distribution of the electric field components E_x, E_y as

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shown in Fig.2a) are noted. The model is excited by a standard
signal generator and the meter 28ИМ (28IM) is used as an
indicator. The field distribution in the model is determined by
a capacitive probe. The value of the retardation is determined by:

$$\gamma = \frac{c}{\lambda_z f_p}$$

where $c = 3 \times 10^8$ m/sec. The measured values of the retardation
are plotted against the electrical width, $\theta^0 = 360^0$
$a/\lambda = 360^0 f \times a/c$. For comparison, the theoretical curve is also
plotted. This is obtained from the formula for a uniform comb of
infinite length along the y axis :

$$\sqrt{\gamma^2 - 1} \, \text{th} \, \frac{2\pi}{\lambda} g \sqrt{\gamma^2 - 1} = \text{tg} \, \frac{2\pi}{\lambda} h \tag{1}$$

where: h is the depth of the channel; g is the width of the
upper gap; λ is the working wavelength. The difference between
the theoretical and experimental curves (about 10%) is due to the
effect of the side walls and the side channels. Thus, this
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formula is applicable, providing the side channels are not too
small. The higher mode shown in Fig.2δ was also investigated and
its dispersion curve is plotted, together with the dispersion curve
of the fundamental mode for comparison. The coupling impedance
was investigated by the absorption method on the same resonant
model. The values of the coupling impedance were determined in the
longitudinal plane of symmetry of the system at the surface of the
comb, where it has its maximum value. The value at any point in
the gap is then determinable from:

$$R = \cos^2 \pi \quad \frac{r}{a} \quad \frac{\text{sh } r \frac{x}{g}}{\text{sh}^2 r} \quad R_{max} \tag{2}$$

where R_{max} is the coupling impedance as measured, and

$$r = g \sqrt{\left(\frac{2\pi}{\lambda_z}\right)^2 - \left(\frac{2\pi}{\lambda}\right)^2} = \frac{2\pi}{\lambda} g \sqrt{\gamma^2 - 1}$$

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Investigation of a rectangular comb...   S/535/60/000/125/003/008
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The absorbing element was a plate of phenopolystyrol covered by aduadag. Two elements were used (Fig.6) and the reason for their shapes and dimensions are discussed. The Q-factor of the model was about 1000 and the accuracy of the measured value of the coupling impedance about 15%. The results are presented graphically together with the curve $R = f(\gamma)$. For comparison, the curve of theoretical values of R_{max}, calculated from the approximate formula:

$$R_{max} = \frac{1510}{kb} \sqrt{\left(1 - \frac{1}{\gamma^2}\right)^3} \frac{sh^2 r}{2r + sh\, 2r} \frac{b}{a} \qquad (3)$$

where $k = 2\pi/\lambda$ is the wave number and b is the waveguide height, is also given. The difference between the theoretical and experimental values does not exceed 20%, and thus formula (3) may be used provided the gaps between the comb and the side walls are not too small.
There are 9 figures and 4 references: 2 Soviet-bloc and 2 Russian translations from non-Soviet publications.

Card 4/2

30743

9,4230 (1532)

S/535/60/000/125/004/008
E133/E162

AUTHORS: Voskresenskiy, D.I., Granovskaya, R.A.,
             Deryugin, L.N., and Fedorov, S.I.

TITLE: Investigation of a slow-wave system with non-
             contacting fins

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no. 125, 1960.
             Elektromagnitnyye zamedlyayushchiye sistemy; metodika
             izmereniya elektricheskikh kharakteristik. 43-66.

TEXT: The efficiency of a travelling wave tube incorporating
a slow-wave structure can be increased by introducing auxiliary
constant accelerating fields in the interaction space and thus
preventing over-grouping. A slow-wave system suitable for this
purpose is the θ-system, as shown in Fig.1. The metallic fins do
not make contact with the waveguide walls and are positioned by
dielectric supports. The electron beam passes through the middle
channel. In this article, the θ-system is investigated
experimentally. Initially, general considerations are discussed.
The experimental measurement of the retardation and of the
coupling impedance of the fundamental synphase wave is described
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