"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.

Operating one year under new conditions. Avt. transp. 36 no.10: 27-28 O '58. (MIRA 13:1)

1. Nachal'nik Kuybyshevskogo gruzovogo avtokhozyaystva No.4.
(Kuybyshev--Transportation, Automotive)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Jun 1947

USSR/Medicine - Diagnosis
Medicine - Gangrene, Gas

"Puncture for the Diagnosis of Gas Infection," L. Rapoport, 2 pp

"Gospital Delo" No 6

A method of puncturing tissues to determine presence of gas at any depth is briefly described.

14T35

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.A.

GUBKIN, S.I.; RAPOPORT, L.A.

Nature of rupture in the plastic deformation of metals. Sbor.nauch. trud.Fiz.-tekh.inst.AN BSSR no.1:79-87 '54. (MLRA 10:1)
(Deformations (Mechanics))

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPAPORT, L.A., PILENKO, A.P.

Refractometric method for the quantitative determination of alcohol solutions. Apt.delo 6 no.4:21-26 Jl-Ag '57. (MLRA 10:9)

1. Iz TSentral'noy nauchno-issledovatel'skoy aptechnoy laboratorii (TsNIaL) Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya USSR
(REFRACTOMETRY) (ALCOHOL)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PHASE I BOOK EXPLOITATION SOV/4018

Akademiya nauk Belorusskoy SSR. Fiziko-tekhnicheskiy institut

Sbornik nauchnykh trudov, vyp. 5 (Collected Scientific Papers of the Institute of Engineering Physics, Academy of Sciences Belorusskaya SSR, No. 5) Minsk, Izd-vo AN BSSR, 1959. 235 p. Errata slip inserted. 1,100 copies printed.

Ed. of Publishing House: L. Mariks; Tech. Ed.: I. Volokhanovich; Editorial Board: V.P. Severdenko, Academician, Academy of Sciences BSSR (Chief Ed.), K.V. Gorev, Academician, Academy of Sciences BSSR, M.N. Bodyako, Candidate of Technical Sciences, and P.A. Parkhutik, Candidate of Technical Sciences.

PURPOSE: This book is intended for technical personnel and scientific workers.

COVERAGE: This collection of 23 articles covers the following subjects: small draft rolling analysis of wire-drawing, design of drop-forging dies, impact upsetting, examination of the effect of temperature on plastic deformation, sulphidation and carburizing processes, the phenomena of pulse-discharge, etc. ~~No personalities~~

Severdenko, V.P., N.T. Prosvirov, and N.P. [illegible]. Small-Flash Drop Forging and Design Elements of Small-Flash Dies for Forging Bodies of Revolution 66

Severdenko, V.P., N.T. Prosvirov, and A.V. Yushkov. Effect of the Flash-Gutter Shape on the Life of Dies 70

Severdenko, V.P., N.T. Prosvirov, and M.Ye. Gavrilov. On the Size of Flash in Drop-Forging Dies 77

Yushkov, A.V. Determination of Accelerations and Forces in Impact Upsetting 84

Yushkov, A.V. Efficiency of Impact In Upsetting Steel Blanks With Various Diameter-to-Height Ratios on a Vertical Upsetter 90

Makushok, Ye.M. Measuring Unit Pressures in the Die Cavities by the Imprint Method 94

Muras, V.S. Resistance of Steel to Deformation at Close-to-Melting Temperatures 99

Dobrovol'skiy, S.I. Effect of Temperature and Rate of Strain on the Mechanical Properties of Silver Chloride 113

Gorev, K.V., L.A. Rapoport, and Z.D. Pavlenko. Neutralization of Lead in the Wisnik-95 Alloy [59.25% Ni, 20%Cr, 16% Co, 3%Ti, 1.75%Al] 120

Gorev, K.V., and S.L. Livshits. Sulphidation in Liquid Baths 126

Gorev, K.V., V.A. Esterkina, M.M. Yanchenko, and T.S. Pavel'yeva. Effect of Carburizing Temperature on the Mechanical Properties and Composition of the 18KhGT, 12KhNZA and 20Kh Steels 133

Bodyako, M.N., Yu.M. Lorko, B.L. Pavlyukevich, and V.I. Parkhimovich. Recrystallization Annealing of Copper With High-Frequency Current Heating 147

Konovalov, Ye.G. Methods for Development of New Processes in Mechanical Machining of Metals 158

Konovalov, Ye.G., and V.N. Chachin. Investigation of Surface Quality in Vibratory Grinding of Carbide Alloys 178

Nekrashevich, I.G., and N.M. Olekhnovich. Examination of a Low-Voltage Pulse Discharge by the Method of Time Scanning of Lighting of Small Portions of the Discharge Zone 189

Nekrashevich, I.G., and N.M. Olekhnovich. On the Mechanism of Phenomena [Occurring] on Electrons During Electric-Pulse Discharges in the Air at Atmospheric Pressure 199

Nekrashevich, I.G., and N.M. Olekhnovich. On Phenomena [Occurring] on Electrodes in Electric Pulse-Discharge Through a Thin Metal Wire 210

Bakuto, I.A. Dependence of Electro-Erosion Effect [on Electrodes] on Conditions of Electric Discharge 213

Romanikhin, B.Ya. Problems in the Accuracy of Magnetic Tachometers 223

Konovalov, Ya.G., and I.S. Lotachevskiy. Investigation of the Cold-Working of Holes With Rotary Ball-Burnishers 230

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

S/137/60/000/012/033/041
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 12, pp. 235-236, # 29981

AUTHORS: Gorev, K.V., Rapoport, L.A., Pavlenko, Z.L.

TITLE: Neutralization of Lead in Nimonik-95 Alloy

PERIODICAL: Sb. nauchn. tr. Fiz.-tekhn. in-t AN BSSR, 1959, No. 5, pp. 120-125

TEXT: The authors studied the effect of Zr, Ce, Ca, Ba and B on heat resistant properties of a nimonik-95 alloy containing (in %): Co 16, Cr 20, Al 1.75, Ti 3, the rest Ni, and Pb admixture in amounts of 0.002, 0.01, 0.05, and 0.1%. Prior to the tests the specimens were heat treated under the following conditions: heating for 8 hours at 1,150°C, air cooling with subsequent aging for 20 hours at 750°C; the methods employed were centrifugal bending and partially endurance tests. It was found that in alloys without Al or with its reduced content (0.8%) in the presence of 0.01 and 0.05% Pb, 0.05% Zr causes reduction and 0.5% Zr improves their properties. The effect of Cl is analogous. B has a positive effect

Card 1/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

S/137/60/000/012/033/041
A006/A001

Neutralization of Lead in Nimonik-95 Alloy

on the heat-resistant properties when its content in relation to Pb is $\leq$ 6.1, opposite to Ba and Ca which are completely unsuitable to be used as neutralizing admixtures. There are 5 references.

G. M.

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

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Rapoport, L. A.

4

*The Nature of Failure During the Plastic Deformation of Metals. S. I. Gubkin and L. A. Rapoport (*Doklady Akad. Nauk S.S.S.R.*, 1954, 94, [illegible] [in Russian]. The lack of uniformity of plastic deformation caused by the uneven distribution of stresses during deformation of metals was studied by electron microscopy and microhardness methods. Owing to localization of the deformation in regions of max. tangential or shearing stresses, the metal undergoes, in these regions, structural changes or phase transformations (as a result of localized temp. increase caused by internal friction) with the formation of so-called "localization layers". Examination of these layers revealed the existence of micro-cracks which led to the eventual failure of the metal.

—S. K. L.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, I.A.

Properties of the Kravz-Tarnavskii strip. Sbor.nauch.trud.Fiz.-tekh.inst. AN BSSR no.1:88-98 '54. (MIRA 10:1)
(Steel--Metallography)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.A.

USSR

1370. Gubkin, S. I., and Rapoport, L. A. On the nature of fracture in plastic deformation of metals (in Russian), *Doklady Akad. Nauk SSSR (N.S.)* 94, 4, 685-688, Feb. 1954.

In the first part of this work, author discusses the fracture of alloys in triaxial compression. He assumes that fracture can be produced only by tensile stresses. Although formally tensile stresses cannot appear in this scheme of stresses, he considers that they could be introduced by the inhomogeneity of the structure or by external forces such as friction, deforming tools, etc. In these areas of inhomogeneity, plastic deformation appears first, and, under appropriate conditions, recrystallization and phase transformation takes place, which in turn can cause change of volume and rise of temperature. All these effects produce tensile stresses. These stresses could be large enough to produce microcracks and finally a fracture.

Experimental evidence is given supporting the concept of the areas of localized plastic deformation and, connected with them, microcracks.

In the conclusion, author attributes the formation of the areas of localized plastic deformation as a characteristic feature of all plastic deformation.

In reviewer's opinion, it is not obvious that the appearance of a new phase, accompanied by change of volume and rise of temperature, as well as recrystallization should introduce tensile stresses in the material.

Attributing the proposed mechanism to all metals as a general characteristic of plastic deformation seems to be not fully justified. Experimental evidence quoted by author refers to alloys with rather complex structures. It is not clear if pure metals and structures in which phase transformation does not occur are considered.

W. Sylwestrowicz, USA

Phys-Tech. Inst, AS BelSSR

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. B.

1/2657. PROSPECTS FOR DEVELOPMENT OF THE SYNTHESIS PROCESS AND RESULTS OF WORK BY VGI NP ON SYNTHESIS. Rapoport, L.B. (Pap. to Section of Artificial Fuel, Technical Council of Ministry of Oil, U.S.S.R., Nov. 1956; title in Neft. Khoz. (Oil Ind., Moscow), May 1957, 68).

MT

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.D. (Ufa)

Calculation of the natural vibrations of circular cylindrical shells not loaded beforehand. Izv.vys.ucheb.zav.; av.tekh. 3 no.3:43-50 '60. (MIRA 13:10)
(Elastic plates and shells--Vibration)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 12795-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m) IJP(c) WW/JM

ACC NR: AT6001263 SOURCE CODE: UR/0000/65/000/000/0129/0147

AUTHOR: Rapoport, L. D.; Yasin, E. M.

ORG: none

24
B+1
26

TITLE: Determining the natural frequencies of corrugated circular cylindrical shells

SOURCE: Prochnost' i dinamika aviatsionnykh dvigateley (Durability and dynamics of aircraft engines); sbornik statey, no. 2. Moscow, Izd-vo "Mashinostroyeniye," 1965, 129-147

TOPIC TAGS: cylindrical shell, corrugated cylindrical shell, shell natural frequency, shell vibration mode

ABSTRACT: The resistance of shells to vibration can be increased either by damping the vibration or by designing shells so that their natural frequencies are far from resonance under given conditions. The second method is cheaper and more effective but involves difficulties when applied to plain shells because they have a very dense spectrum of natural frequencies. The spectrum of plain shells can be "expanded" by making fine longitudinal corrugations in them. Such longitudinally corrugated shells are treated as plain anisotropic ones, assuming that the radius of the corrugation wave, which is comensurable with the thickness of the shell, is negligibly small in comparison with the length and the radius of the shell. The equality of pliabilities in both circumferential and axial directions of plain anisotropic and

Card 1/2 UDC: 534.1-16.014.1:62-215:621.9-434

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 12795-66

ACC NR: AT6001263

corrugated shells under tension (compression), shear, flexure, and torsion is taken as the condition for their equivalence. The elasticity moduli in tension, shear, flexure, and torsion in longitudinal and circumferential directions are determined for both plain and corrugated shells by using the reciprocity principle of work, and introducing coefficients of structural anisotropy which determine the ratio of rigidities in tension, shear, flexure, and torsion in both directions for both types of shells. Expressions for these coefficients are derived for various shapes of the corrugation wave and are given in a table. The vibration of a circular cylindrical shell "finely" corrugated in the axial direction is analyzed and its natural frequencies and vibration modes are determined. Expressions for determining the mode of vibration for shells with various boundary conditions are also given in a table. A formula for the minimum natural frequency is derived. The results of an analytical calculation of natural frequencies are compared with experimental data for both plain and corrugated shells in tables so that the effect of corrugation on the "expansion" of the natural-frequency spectrum can be seen. Orig. art. has: 8 figures, 34 formulas, and 5 tables. [VK]

SUB CODE: 20/ SUBM DATE: 17Jul65/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 4114

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

84048

S/147/60/000/003/007/018
E031/E420

26.2145

AUTHOR: Rapoport, L.D. (Ufa)

TITLE: The Calculation of the Characteristic Oscillations of Previously Unloaded Circular Cylindrical Shells

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1960, No.3, pp.43-50

TEXT: Following Vlasov (Ref.3), the effect of inertial terms on the frequencies and forms of the transverse oscillations is not taken into account. There are three basic sets of boundary conditions, corresponding to a shell freely supported at both ends, a shell fixed along its boundary and a shell with free boundaries. The remaining cases can be obtained by using combinations of these conditions at the different edges of the shell. By introducing an intermediate function F in terms of which the displacements u, v, w are expressed, an equation for w is obtained for which a solution is sought in the form of the sum of terms like $W_i(\xi, \varphi)T_i(t)$, where ξ, φ are the coordinates of the shell and t is the time. By separation of the variables we obtain the equation of simple harmonic motion for T, and an equation for W_i, to which separation of variables is again applied. The solution

Card 1/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

84048
S/147/60/000/003/007/018
E031/E420

The Calculation of the Characteristic Oscillations of Previously Unloaded Circular Cylindrical Shells

is sought as the sum of terms of the form $X_m(\xi)\Phi_n(\varphi)$, where $X_m(\xi) = \Phi e^{\lambda_m \xi}$, and $\Phi_n(\varphi) = \sin m\phi$. The boundary conditions on u, v, w are now transformed to conditions on X. The form of the transverse oscillations and the eigenvalues are tabulated for the various boundary conditions. The radial deflection of the shell is given by the expression for W_i. To determine the longitudinal and tangential deflections, we return to the basic equation, with the third of the boundary conditions. The derivatives of v are eliminated and a previous substitution used to eliminate w. The solution for u_i is sought in the form $u_i = Y_i(\xi) \sin n\varphi \sin(\omega t + \alpha)$. The solution for Y is obtained. Similarly, by excluding u, w, an equation for v is obtained whose solution is sought in a form similar to that above for u, with Y replaced by Z and cos $n\varphi$ replacing sin $n\varphi$. The expression for Z is similar to that for Y. Finally, the results derived are compared with experimental data for the case of a shell fixed at its boundary. The experiment is described and the frequencies compared for different modes of

Card 2/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

84048
S/147/60/000/003/007/018
E031/E420

The Calculation of the Characteristic Oscillations of Previously Unloaded Circular Cylindrical Shells

oscillation, with an indication of the percentage errors in each case. There are 3 figures, 3 tables and 9 references: 7 Soviet, 1 English and 1 German.

ASSOCIATION: Kafedra soprotivleniya materialov i teoreticheskoy mekhaniki (Chair for Strength of Materials and Theoretical Mechanics)

SUBMITTED: March 25, 1960

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. G.; ROMANOVSKIY, N. N.

Diatom flora in the sediments having syngenetic perennial ice veins. Merzl. issl. no.1:162-166 '61.

(MIRA 16:1)

(Yakutia—Diatoms)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.G.

"Biochemical determinanats of microbial diseases" [in English] by R.J. Dubos. Reviewed by L.G. Rapoport. Zhur.mikrobiol.epid. i imun. 30 no.1:122-126 Ja '58. (MIRA 12:3)
(BIOCHEMISTRY) (IMMUNITY)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PISARENKO, V.I.; RAPOPORT, L.G.; KORETSKAYA, L.S.

Authors' abstracts. Zhur.mikrobiol., epid. i immun. 42 no.2:143 F '65. (MIRA 18:6)

1. Dushanbinskiy institut epidemiologii i gigiyeny.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.G.

New viruses and their significance in human pathology. Zdrav. Tadzh. 6 no.6:3-8 '59. (MIRA 13:4)

1. Iz Stalinabadskogo Instituta epidemiologii i gigiyeny.
(VIRUSES)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.G.; SHIKHALEYEVA, V.K.

Paralytic poliomyelitis in Tajikistan in 1960. Zdrav. Tadzh. 8 no.3:21-26 My-Je '61. (MIRA 14:6)

1. Iz Stalinabadskogo instituta epidemiologii i gigiyeny i Respublikanskoy SES.

(TAJIKISTAN--POLIOMYELITIS)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.G.; YASINSKIY, A.V.

Encephalitis of unclear etiology in the Gissar Valley. Zdrav. Tadzh. 9 no.1:25-27 Ja-F '62. (MIRA 15:4)

1. Iz Dushanbinskogo instituta epidemiologii i gigiyeny.
(GISSAR VALLEY--ENCEPHALITIS)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RASULOV, M.Ya.; RAPOPORT, L.G.

Scientific Session of the Dushanbe Institut of Epidemiology and Hygiene. Zdrav. Tadzh. 10 no.3:40-41 '63.
(MIRA 17:4)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

TANATAR, D.B., professor, doktor tekhnicheskikh nauk; RAPPOPORT, L.I., redaktor; PETERSON, M.M., tekhnicheskiy redaktor.

[Diesel engines; design and calculations] Dizeli. Komponovka i raschet. Izd. 2-oe, perer. i dop. Leningrad, Izd-vo "Morskoi transport", 1956. 404 p. (MLRA 9:6)
(Diesel engines)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

TSYRKIN, Mikhail Isaakovich; KAPITANSKIY, Vil' Moiseyevich; PETROV, P.P., kand. tekhn. nauk, retsenzent; RAPOPORT, L.I., kand. tekhn. nauk, retsenzent; LEVIN, M.I., kand. tekhn. nauk, nauchnyy red.; APTEKMAN, M.A., red.; TSAL, R.K., tekhn. red.

[Remote control systems for main marine diesel engines] Sistemy distatsionnogo upravleniia glavnymi sudovymi dizeliami. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 245 p. (MIRA 14:11)

(Remote control) (Marine diesel engines--Water)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPAPORT, L.I.

"Farmacia," nos. 1-12, 1961. Reviewed by L.I. Rapaport. Farmatsev. zhur. 18 no.1:92-93 '63. (MIRA 17:10)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

[illegible], A.I.; [illegible] [illegible]

Use of the refractometric method in the analysis of powdered medicinal mixtures. Farmatsev. zhur. 18 no.1:31-37 '63.

(MIRA 16:10)

1. Tsentral'naya nauchno-issledovatel'skaya aptechnaya laboratoriya Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya [illegible].

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPAPORT, L.I.; KOGAN, G.M. [Kohan, H.M.]

Preparation of precipitated sulfur and gypsum for stomatology. Farmatsev. zhur. 17 no.5:72 '62. (MIRA 17:9)

1. TSentral'naya nauchno-issledovatel'skaya aptechnaya laboratoriya Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya UkrSSR.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.I.; KOSTINSKAYA, A.D.

Stability, analysis and rectification of ammonia-anise drops under pharmacy conditions. Aptech. delo 12 no.3:49-52 My-Je'63 (MIRA 17:2)

1. TSentral'naya nauchno-issledovatel'skaya aptechnaya laboratoriya Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya UkrSSR.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

TANATAR, Daniil Borisovich, prof., doktor tekhn. nauk [deceased]; Prinimali uchastiye: FOMIN, Yu.Ya., dots.; KAMKIN, S.V., dots.; RAPOPORT, L.I., kand. tekhn. nauk, red.; SANDLER, N.V., red.izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Diesel engines; their arrangement and design] Dizeli; komponovka i raschet. Izd.3., perer. i dop. Leningrad, Izd-vo "Morskoi transport," 1963. 439 p. (MIRA 16:11)
(Diesel engines--Design and construction)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

TANATAR, Daniil Borisovich, prof., doktor tekhn. nauk [deceased]; Prinimali uchastiye: FOMIN, Yu.Ya., dotsent; KAMKIN, S.V., dotsent; RAPOPORT, L.I., kand. tekhn. nauk; SHCHELGACHEV, R.V., inzh.-mekhanik; SANDLER, N.V., red. izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Disel engines; their component parts and design] Dizeli; komponovka i raschet. Izd.3., dop. i perer. Leningrad, Izd-vo "Morskoi transport," 1963. 439 p. (MIRA 16:6)
(Marine diesel engines--Construction and design)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

TAMATOR, Daniil Borisovich, prof., doktor tekhn. nauk [deceased]; FOMIN, Yu.Ya., dots.; KAMKIN, S.V., dots.; RAPOPORT, L.I., kand. tekhn. nauk; SHCHELGACHEV, R.V., inzh.-mekhanik; SANDLER, N.V., red.izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Diesel engines; their design and calculation] Dizeli, komponovka i raschet. Izd.3., perer. i dop. Leningrad, Izd-vo "Morskoi transport," 1963. 439 p. (MIRA 16:7)
(Diesel engines--Design and construction)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

STRUMPE, Petr Ivanovich, kand.tekhn.nauk; YAKUSHENKOV, Andrey Andreyevich, kand.tekhn.nauk; SYROMYATNIKOV, Viktor Fedorovich, kand.tekhn.nauk; RAPOPORT, Leonid Il'ich, kand.tekhn.nauk; MELESHKIN, Georgiy Aleksandrovich, kand.tekhn.nauk; MIROSHNICHENKO, Il'ya Petrovich, kand.tekhn.nauk; ARAKELOV, Vladimir Mikhaylovich, inzh.; SKOMOROVSKIY, Rostislav Vsevolodovich, kand.tekhn.nauk; PESOCHINSKIY, Viktor Nikolayevich, kand.tekhn.nauk; NELIDOVA, E.S., red.; TIKHONOVA, Ye.A., tekhn.red.

[Over-all mechanization and automatization in the merchant marine] Kompleksnaia mekhanizatsiia i avtomatizatsiia na morskom transporte. Pod obshchei red. P.I.Strumpe. Moskva, Izd-vo "Morskoi transport," 1959. 95 p. (MIRA 13:5)

(Merchant marine--Equipment and supplies)
(Cargo handling--Equipment and supplies)
(Automatic control)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

KHIRURGIYA

FEDORUK, F.F., RAPOPORT, L.I.

Case of acute appendicitis in tuberculosis of the spine with gravity abscess in the right iliac region [with summary in French]. Probl. tub. 36 no.3:101 '58 (MIRA 11:5)

1. Iz Severinovskogo kostno-tuberkuleznogo sanatoriya (glavnyy vrach F.F. Fedoruk) Vinnitskogo oblzdravotdela.

(TUBERCULOSIS, SPINAL, compl.
acute appendicitis, with abscess in right iliac region (Rus))
(APPENDICITIS, compl.
acute, with abscess in right iliac region in spinal tuberc. (Rus))

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

AFANAS'YEV, Konstantin Arkad'yevich, inzh.; GRECHIN, Modest Alekseyevich, inzh.; KORCHAGIN, Mikhail Ivanovich, kand.tekhn.nauk; LOGINOV, Sergey Petrovich, kand.ekon.nauk; MIROSHNICHENKO, Il'ya Petrovich, kand.tekhn.nauk; RAPOPORT, Leonid Il'ich, kand.tekhn.nauk; SYROMYATNIKOV, Viktor Fedorovich, kand.tekhn.nauk. Prinimali uchastiye: RAYEVSKAYA, Ye.A., inzh.; GRIGOR'YEV, Ya.I., inzh. STRUMPE, P.I., red.; MARCHUKOVA, M.G., red.izd-va; LAVRENOVA, N.B., tekhn.red.

[Modernization of seagoing cargo vessels] Modernizatsiia morskikh transportnykh sudov. Pod obshchei red. P.I.Strumpe. Moskva, Izd-vo "Morskoi transport," 1960. 306 p. (MIRA 14:1)

(Freighters--Equipment and supplies)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

GEL'PERIN, I.I., kand. tekhn.nauk; RAPOPORT, L.L., kand. tekhn. nauk

Special characteristics of the calculation for the removal of carbon monoxide with liquid nitrogen. Trudy GIAP no.8:213-218 '57. (MIRA 12:9)

(Carbon monoxide) (Nitrogen) (Gas--Purification)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. L.

Spravochnik po razdeleniyu gazovykh smesey metodom glubokogo okhlazhdeniya (Reference book on the separation of gas mixtures by methods of low refrigeration, comp. by: I. I. Gel'perin, G. M. Zelikson, i L. L. Raponport. Moskva, Goskhimizdat, 1953.
391 p. Diagrs., Tables.
Bibliography: P. (380)-381

SO: N/5
668.63
.G3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

SOV/124-58-2-1980

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 67 (USSR)

AUTHORS: Gel'perin, I. I., Rapoport, L. L.

TITLE: The Hydraulic Resistance of Coiled Heat Exchangers (Gidravlicheskoye soprotivleniye vitykh teploobmennikov)

PERIODICAL: Tr. Gos. n.-i. i proyektn. in-ta azotn. prom-sti., 1954, Nr 3 pp 193-199

ABSTRACT: It is shown that the calculation of the hydraulic resistance of a coiled heat exchanger according to formulas obtained from tests made on a bundle of tubes of relatively low solidity ratio yields an overrated value for the hydraulic resistance. An empirical formula is obtained for the calculation of the hydraulic resistance of the high-solidity bundle of tubes comprising a coiled heat exchanger.

I. S. Simonov

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

GEL'FERIN, N.I., prof.; ZELIKSON, G.M.; RAPOPORT, L.L.; YANTOVSKIY, S.A., red.; KOGAN, V.V., tekhn. red.

[Manual on the low-temperature separation of gas mixtures] Spravochnik po razdeleniiu gazovykh smesei metodom glubokogo okhlazhdeniia. Izd.2. perer. Pod obshchei red. N.I.Gel'perina. Moskva, Goskhimizdat, 1963. 512 p. (MIRA 16:7)
(Gases--Separation)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT L. L.

Chem
4

V Gel'perin, I. I., Zelikson, G. M., and Rapoport, L. L.: Spravochnik po razdeleniyu gazovykh s[redacted] glubokogo okhlazhdeniya (Handbook on Separatio[redacted] Mixtures by the Method of Deep Cooling). Moscow: Gosudarst. Nauch.-Tekh. Izdatel'stvo Khim. Lit. 1953. 391 pp.

ED

(2)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

GEL'PERIN, I.I.; KALININA, S.Ye.; RAPOPORT, L.L.

Production of heavy water from a nitrogen-hydrogen mixture. (MIRA 18:7)
Khim. prom. no.6:475-479 Je '64.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

GEL'PERIN, I.I., professor; ZELIKSON, G.M.; RAPOPORT, L.L.

[Reference book on separating gaseous mixtures by the low temperature method] Spravochnik po razdeleniiu gazovykh smesei metodom glubokogo okhlazhdeniia. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1953. 391 p. (MLRA 7:2)

(Gases--Liquefaction)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 22477-65 EEC(b)-2/EWT(1)/EEC(f)/EWA(d) IJP(c)/AFWL/ASD(a)-5/SSD/BSD/
ACCESSION NR: AP5002255 AS(mp)-2/ESD(t) GG S/0139/64/000/006/0058/0063

AUTHOR: Rapoport, L. P.

TITLE: Microscopic theory of magnetic field quantization in superconductors

SOURCE: IVUZ. Fizika, no. 6, 1964, 58-63

TOPIC TAGS: superconductivity, superconducting metal, magnetic flux quantization, quantum vortex

ABSTRACT: In an earlier paper (with A. G. Krylovetskiy, ZhETF v. 43, 2122, 1962) the author has shown that quantum vortices, in which the velocity and the energy are quantized in the same manner as in superfluid HeII, are produced in a superfluid Fermi gas. The equations derived in the earlier paper are generalized here to the case with an external electromagnetic field. An equation is derived which replaces the Schrodinger equation for electrons in an ordinary method, but which, unlike the Schrodinger equation, is nonlinear. A microscopic theory is developed for the quantization of the magnetic flux through a superconducting cylinder on the basis of the solution of this equation. It is shown that if the fermions are charged, the velocity quantization leads to quantization of the current density

Card 1/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 22477-65

ACCESSION NR: AP5002255

3

and magnetic-field density, and since the external magnetic field hardly penetrates into a superconductor (Meissner effect), the quantized currents flowing over the superconductor surface produce a field which is superimposed on the external field to form the total magnetic flux in the superconductor cylinder. It is shown further that such a magnetic flux is quantized in units of $2\pi\hbar C/e^*$, which is in agreement with the experimentally observed quantization of the magnetic flux through a hole in a superconducting cylinder ($e^* = 2e$ -- double the electron charge). The value of this quantum is 2.07×10^{-7} Gauss/cm^2. It is concluded that the observed quantization of the magnetic flux is a consequence of the occurrence of quantum vortices in the semiconductor, and can therefore be regarded as experimental proof of the presence of such vortices in a superconducting metal. "The author thanks the participants of the seminars of Professor D. D. Ivanenko and A. S. Davydov for a discussion of the results." Orig. art. has: 28 formulas.

ASSOCIATION: Voronezhskiy gosuniversitet (Voronezh State University)

SUBMITTED: 10Jun63 ENCL: 00 SUB CODE: GP, EM

NR. REF SOV: 007 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. P.

USSR/Nuclear Physics - Positron 11 Feb 50

"Characteristics of Positron Decay," M. A. Levitskaya, L. P. Rapoport, Voronezh State U

"Dok Ak Nauk SSSR" Vol LXX, No 5, pp 817-820

Fermi's theory unites beta-positive and beta-negative decay, making no distinction between them. At same time, beta-negative (electron) emission exhibits clear arrangement of long periods in respect to regions of Z with two isotopes of odd nuclei that should not be neglected by any theory. Beta-positive (positron) emission also exhibits certain regularities in respect to these regions. Regularities are demonstrated on graph with logarithm of half-lives of plus-active nuclei plotted against atomic number. Submitted 14 Nov 49 by Acad S. I. Vavilov.

PA 165T46

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Rapoport, L. P.

USSR.

K-capture and specific zones. M. A. Levitskaya and L. P. Rapoport (State Univ., Voronezh). *Doklady Akad. Nauk S.S.S.R.* 79, 953-5(1951); cf. *C.A.* 44, 10545f.—In the specific zones, where K-capture is the most probable decay, the percentage of β-decompns. is compared with that for K-capture. The reasons for the influence of the specific zones on the probability of K-capture occurring are discussed from the standpoint of nuclear structure.
J. Rovtar Leach

62
1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Rapoport, L. P.

USSR

Effect of the nucleus structure on the probability of K-capture. L. P. Rapoport (Voronezh State Univ.). Zhur. Eksptl. i Teoret. Fiz. 25, 283-8(1953).—By taking into consideration the effect of the distribution of protons in the nucleus on K-capture, R. shows that a deviation of the field inside the nucleus from the Coulomb electrostatic law drastically changes the probability of the restricted transitions. From this it is derived that the theoretical ratio of the probabilities of K-capture to the competing positron decay decreases. A. P. Kotleby

62

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.

USSR/Nuclear Physics - Nucleon Density FD-801

Card 1/1 Pub. 146-14/21

Author : Rapoport, L. P., and Filimov, V. A.

Title : Statistical computation of density distribution of nucleons, and the shell structure of the nucleus

Periodical : Zhur. eksp. i teor. fiz., 27, 243-250, Aug 1954

Abstract : The Ritz method with two variable parameters is applied to the statistical computation of density distribution of nucleons in the nucleus. The obtained results are applied to the analysis of the shell structure of the nucleus. The results are in agreement with the scheme of shell filling suggested by Mayer (Phys. Rev. 78, 16, 22 (1949)). Eight references including 5 foreign.

Institution : Voronezh State University

Submitted : November 20, 1953

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. P.

USSR/Physics - Statistical theory of atom

FD-2978

Card 1/1 Pub. 146 - 19/28

Author : Rapoport, L. P.

Title : Problem of the generalization of the statistical theory of the atom

Periodical : Zhur. eksp. i teor. fiz., 29, September 1955, 376-377

Abstract : The familiar nonrelativistic Hellmann equations generalizing the statistical theory of the atom to the case of grouping of electrons according to orbital numbers (H. Hellmann, Acta Phys.-Chim. URSS, 4, 225, 1936) can be generalized by the inclusion in them of relativistic and spin-orbital corrections for the energy. In connection with made attempts to use the statistical methods for calculation of the density distribution of nucleons in nuclei (D. Ivanenko, V. Rodichev, DAN SSSR, 70, 60[illegible], 1950; P. Gombash, Usp. fiz. nauk, 49, 385, 1953), the inclusion into these calculations of the term that takes into account the spin-orbital interaction and also the possibility of the calculation of the densities of particles with given orbital moment represent to the author especial interest. He considers the Dirac equation for radial function G and F in a centrally symmetric field with potential V, and compares with the nonrelativistic Schroedinger equation. Four references: e.g. L. Rapoport, V. Filimonov, ibid., 27, 243, 1954.

Institution : Voronezh State University

Submitted : March 1, 1955

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Rapoport, L. P.

Category : USSR/Nuclear Physics - Structure and Properties of Nuclei C-4

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5922

Author : Rapoport, L. P., Butusov, Yu.M.
Inst : Voronezh University
Title : Contribution to the Theory of the Excitation Energy of Heavy Nuclei.

Orig Pub : Dokl. AN SSSR, 1956, 108, No 6, 1037-1040

Abstract : An attempt to combine in a single model the individual-partial and collected properties of the nuclei encounters difficulties, connected with the number of degrees of freedom of the nucleons. If one uses the special coordinate system, then, as shown by Sussmen (Referat Zhur Fizika, 1956, 6314), the individual and collected motions separate, and the total number of degrees of freedom does not exceed 3 A. With the aid of this system of coordinates, the authors construct a Hamiltonian for the nucleus, in which, in addition to the ordinary operators of individual motions, there are terms that take into account the deformation of the nucleus and the surface energy. In view

Card : 1/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. P.

56-6-29/47

AUTHORS: Rapoport, L. P. , Butusov, Yu. M.

TITLE: On the Localization of Nucleons in a O_8^{16} Nucleus (O lokalizatsii nuklonov v yadre O_8^{16})

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1957, Vol. 33, Nr 6 (12), pp. 1507 - 1508 (USSR)

ABSTRACT: In the present paper the attempt is made to determine this localization by the method developed by R. Daudel (reference 3). The authors here investigate a system of nucleons in the volume V, which are in a state with a certain value of the projection of the spin. May it be assumed p protons (neutrons) with the spin 1/2 exist. The space V is subdivided in p volumina v_i, so that in each of these volumina a probability P_i, a proton (neutron) with spin 1/2, to be found in it, can be defined. The same definition holds also for the spin - 1/2. The quantity $\eta = (p - \sum_i P_i)/p$ characterized the lack of a localization of nucleons for an assumed subdivision of V in v_i. Such a subdivision is all the better the smaller is the quantity η. For P_i an expression (multiple integral) is written down. According to the oscillatory model the O^{16}-nucleus is in the state $(s_{1/2})^4 (1p_{3/2})^8 (1p_{1/2})^4$. The wave func-

Card 1/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

On the Localization of Nucleons in a O_8^{16} Nucleus 56-6-29/47

tion of the nucleus is $\psi = \det \varphi_i \cdot \det \varphi_k$, where φ_i denotes the wave function of a proton of the oscillator model, and where the index refers to the neutron. The volume of the nucleus is here subdivided into 4 sub-spaces each containing 4 protons and neutrons. Because of considerations of symmetry three possible subdivisions of the nuclear volume are obtained: a) Three concentric spheres, b) a sphere with the radius a and 3 domains assumed as follows: $0 \leqslant \theta \leqslant x$, $x \leqslant \theta \leqslant \pi - x$, $\pi - x \leqslant \theta \leqslant \pi$ (here it is true that $a \leqslant r \leqslant \infty$, $0 \leqslant \varphi \leqslant 2\pi$), c) The protons (neutrons) with the spin 1/2 (-1/2) form the apexes of a tetrahedron. The possibility a is the best. The radii of these spheres are 0,768.R, 1,023.R, 1,316.R, where R denotes the nuclear radius determined from the maximum slope of the tangent on the curve of the density distribution of the nucleons. At 0,768.R the density of nucleons amounts to 88 % of their maximum value, so that three subspaces in the surface layer of the nucleus and one subspace in the center exist. There is no geometric localization of the nucleons on the shells s and p. By the determination of the dimensions of the subspace the upper limit for the diameter of a nucleon is obtained. The radius of a nucleon can not be greater than $4,18 \cdot 10^{-14}$ cm. This agrees well with the results obtained by the scattering of electrons by protons.

Card 2/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

On the Localization of Nucleons in a O_8^{16} Nucleus 56-6-29/47

There are 4 references, 1 of which is Slavic.

ASSOCIATION: Voronezh State University
(Voronezhskiy gosudarstvennyy universitet)

SUBMITTED: April 18, 1957

AVAILABLE: Library of Congress

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Rapoport, L.P.

Generalized statistical theory of the atom. L. P. Rapoport. *Soviet Phys., JETP* 2, 347-9(1956)(Engl. translation).—See *C.A.* 50, 2307e. B. M. R.

1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.

Microscopic theory of the quantization of a magnetic flux in superconductors. Izv. vys. ucheb. zav.; fiz. 7 no.6:58-63 '64. (MIRA 18:2)

1. Voronezhskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PROKESHKATA, T.L.; RAPOPORT, L.P.

Data on the study of natural foci of tick-borne rickettsial diseases in southwestern Kirghizia. Zhur.mikrobiol.,epid.i immun. 40 no.12:56-[illegible] D '63. (MIRA [illegible])

1. Iz Kirgizskogo meditsinskogo instituta i Kirgizskoy protivochumnoy stantsii.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.

Theory of quantization of a magnetic flux in superconductors. Zhur. eksp. i teor. fiz. 45 no.5:1453-1455 N '63. (MIRA 17:1)

1. Voronezhskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACC NR: AP7001082 (A,N) SOURCE CODE: UR/0439/66/045/003/0430/0435

AUTHOR: Berendyayeva, E. L.; Bibikov, D. I.; Rapoport, L. P.; Popov, V. K.; Varivodina, T. A.

ORG: Kirghiz Antiplague Station, Frunze (Kirgizskaya protivochumnaya stantsiya); Central Asian Antiplague Station, Alma-Ata (Sredneaziatskiy protivochumniy institut)

TITLE: Experience of studying contacts within a population of Altai marmots by means of radioactive tagging

SOURCE: Zoologicheskiy zhurnal, v. 45, no. 3, 1966, 430-435

TOPIC TAGS: parasitology, animal parasite, marmot, flea, BIOLOGIC ECOLOGY

ABSTRACT: Marmots (*Marmota marmota baibacina*) collected in Central Tyan'-Shan' in the summer of 1962 and 1963 were tagged with subcutaneous injections of S^{35} or P^{32} (in doses of 1 μcu or 0.5 μcu, respectively, per kg of weight). Contacts among marmots were traced by counting tagged fleas from untagged animals after 30—42 days. In one collection, 118 our of 140 fleas collected had bitten tagged marmots. Fleas tagged with a surface application of the isotopes were also used. Some were found 109 m from their release points after 23 days, and a maximum of 500 m away after 42 days. The study showed that the degree

Card 1/2 UDC: 599.322.2:578.084.2:611-018-0.88.91

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACC NR: AP7001082

of contact within a given marmot population (and the number of fleas exchanged) depends numerically on the distribution of marmots, their population structure (number and location of occupied burrows), and the number of fleas. Under the following field conditions — sparse marmot population, large number of fleas, many empty burrows — fleas were more widely dispersed (360 m in 30 days) and more frequently exchanged among animals. With a dense population of marmots and relatively few fleas, fleas were found only 120—180 m away from the release point in 30 days. The most frequent contacts were observed among marmots living on the boundary of landscape areas; their movements into areas with more favorable food conditions were traced visually and using the tags. It was shown that in summer, when the animals successively inhabit empty burrows in a neutral zone, fleas are transferred among different marmot groups. It was concluded that the tagging of marmots and fleas is a most promising method of modeling plague epizootics in these animals. Orig. art. has: 3 tables and 3 figures. [WA-50; CBE No. 14] [JS]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 013

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACCESSION NR: AP4024065 S/0048/64/028/002/0388/0393

AUTHOR: Rapoport, L.P.; Kry*lovetskiy, A.G.

TITLE: The fragmentation mechanism in interaction of high energy particles with nuclei [Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev 25 Jan to 2 Feb 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 388-393

TOPIC TAGS: fragmentation mechanism, fragmentation reaction, high energy reaction, nuclear reaction, cascade evaporation theory, nuclear shock wave, Ag^{108}

ABSTRACT: A number of experimental studies, carried out in recent years both in the Soviet Union and abroad, have disclosed that incident to bombardment of nuclei with high energy particles there are knocked out light nuclei with $Z \geqslant 3$. This reaction is now called fragmentation. While the experimental aspects of this phenomenon are fairly well known, the nature of the fragmentation mechanism is still obscure. Attempts to explain the fragmentation process by means of the cascade-evaporation theory have met with serious difficulties. In particular, present cascade theory, at any rate, is incapable of explaining the following: 1) absence of corre-

Card 1/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACCESSION NR: AP4024065

lation as regards the fragment energies, but presence of correlation as regards direction of the fragment and the fast particle or the two fragments, 2) energy independence of the charge distribution, 3) the multiplicity of fragment production, 4) the presence among the multiply charged fragments of particles with an energy lower than the Coulomb barrier, 5) absence of fast particles scattered to angles close to 180°. According to cascade theory there should be such nucleons, for otherwise one cannot explain the transfer of a large momentum to the fragment ejected forward. In fact, in general, experiments on scattering of fast nucleons lead to a small value of the cross section for transfer of large momentum (G.Leksin and Yu. Kumekin,Zhur.eksp.i teor.fiz.33,1147,1957). In the present paper there is proposed a different fragmentation mechanism, based on development of the idea of collective motions in nuclei (A.E.Glassgold, W.Heckrotte and K.Watson,Ann.Phys.6,1,1959). This mechanism appears capable of explaining a number of effects that are inexplicable by means of the cascade-evaporation theory. The underlying idea is that the heavy fragments are knocked out by a Mach type shock wave forming in the nuclear matter incident to passage through it of a particle with relativistic velocity. The treatment is based on consideration of behavior of a nucleon in a nucleus in accord with the nonstatic theory of a Fermion gas and there is derived the hydrodynamic equation of motion, invoking the principle of least action. The inference is that the

Card 2/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACCESSION NR: AP4024065

fragment (nucleon cluster) forms on or at the nuclear surface and is then ejected by the shock wave. Some numerical evaluations are made for the specific case of the parent nucleus Ag^{108}. The evaluations indicate that the probability for ejection of a fragment is determined primarily by the probability W for formation of the appropriate cluster on the nuclear surface and two parameters ΔR and u. The first two quantities are independent of the energy of the particle giving rise to the shock wave; the particle energy dependence of u is obscure. Thus, most of the present experimental data on fragmentation can, at least quantitatively, be explained on the assumption that most of the particles with $Z \leq 2$ are ejected from the nucleus by cascade-evaporation processes and the fragments with $Z \geq 3$ are ejected by the proposed shock wave mechanism. "The authors are grateful to O.V.Lozhkin and Yu.P.Yakovlev for calling their attention to the problem." Orig.art.has: 21 formulas and 1 table.

ASSOCIATION: Voronezhskiy gosudarstvenny*y universitet (Voronezh State University)

SUBMITTED: 00 DATE ACQ: 08Apr64 ENCL: 00

SUB CODE: NS NR REF SOV: 004 OTHER: 006

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

KADMENSKIY, S.G.; RAPOPORT, L.P.

Description of the superfluidity of an atomic nucleus by the method of variational S-matrix derivatives. Izv. vys. ucheb. zav.; fiz. no. 5:43-49 '63. (MIRA 16:12)

1. Voronezhskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. P.; SEMENOVA, N. I.

Variations in the abundance of gerbils and lesser murine rodents in the regions of Kirghizistan contiguous to Fergana. Izv. AN Kir. SSR. Ser. biol. nauk 4 no.1:41-48 '62. (MIRA 15:10)

(Kirghizistan--Rodentia)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.; KRYLOVETSKIY, A.G.

Quantum vortices in a fermion system. Zhur.eksp.i teor.fiz. 43 no.6:2122-2127 D '62. (MIRA 16:1)

1. Voronezhskiy gosudarstvennyy universitet.
(Quantum theory)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

S/056/62/043/006/026/067
B112/B186

AUTHORS: Rapoport, L. P., Krylovetskiy, A. G.

TITLE: Quantum vortices in a fermion system

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 6(12), 1962, 2122 - 2127

TEXT: The fundamental properties of quantum vortices in an unlimited system of fermions at any temperature $T < T_c$ are derived. The fourier components of the Green's temperature functions $G_\omega(r, r')$ and $F_\omega(r, r')$ are determined by the equations

$$\left\{i\omega + \frac{1}{2m^*}\frac{\partial^2}{\partial r^2} + \mu\right\} G_\omega(r, r') + \Delta_T(r) F^+_\omega(r, r') = \delta(r - r'),$$

$$\left\{-i\omega + \frac{1}{2m^*}\frac{\partial^2}{\partial r^2} + \mu\right\} F^+_\omega(r, r') - \Delta^*_T(r) G_\omega(r, r') = 0; \quad (1)$$

$$\Delta^*_T(r) = gT\sum_\omega F^+_\omega(r, r), \quad \omega = \pi(2n + 1)T, \quad n = \ldots -1, 0, 1, \ldots, \quad (2)$$

where m^* is the reduced mass, μ is the chemical potential, and g is the

Card 1/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

energy of the pair-producing interaction. For the quantities $\psi(r)$ and $\Delta_T^*(r)/\Delta_T^0$ and $l^2 = C/2m^*B$, where

$$C = \frac{2\pi}{3} m^* v_0^2 N_T(0)\, T \sum_\omega \left\{ \frac{1}{(\omega + \sqrt{\omega^2 + \Delta_T^{02}})\sqrt{\omega^2 + \Delta_T^{02}}} + \right.$$

$$\left. + \Delta_T^{02} \frac{3\sqrt{\omega^2 + \Delta_T^{02}} + \omega}{2(\omega + \sqrt{\omega^2 + \Delta_T^{02}})^3 (\omega^2 + \Delta_T^{02})^{3/2}} \right\}, \qquad (20)$$

$$B = \frac{\pi}{2} N_T(0)\, T \sum_\omega \frac{\Delta_T^{02}}{(\omega^2 + \Delta_T^{02})^{3/2}},$$

the vortex equation

$$\left\{ l^2 \frac{\partial^2}{\partial r^2} + 1 - |\psi(r)|^2 \right\} \psi(r) = 0. \qquad (22)$$

is derived. The quantity l has the meaning of an inner vortex radius ($\sim 10^{-12}$ cm for nuclear matter, and $\sim 10^{-4}$ cm for metals at T = 0). Its temperature dependence is given by the formula

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

$$\frac{1}{l} = \sqrt{\frac{3m^*}{\mu}} \begin{cases} \frac{8\pi^2}{7\zeta(3)}\left(T^2 \ln \frac{T_c}{T}\right)^{1/2}, & T \to T_c \\ \frac{1}{2}\left(\Delta_0^0 - \sqrt{2\pi T \Delta_0^0} e^{-\Delta_0^0/T}\right), & T \to 0. \end{cases} \quad (26).$$

The general conclusion is that a system of fermions in the superfluid state possesses quantum vortices similar to those which arise in a boson system.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: April 14, 1962

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.; KRYLOVETSKIY, A.G.

Generalized superconductivity equations. Dokl.AN SSSR 145 no.4:771-774 Ag '62. (MIRA 15:7)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom N.N.Bogolyubovym.
(Superconductivity) (Integral equations)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

40087

S/020/62/145/004/012/024
B178/B102

24.2140

AUTHORS: Rapoport, L. P., and Krylovetskiy, A. G.

TITLE: Generalized equations of superconductivity

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 4, 1962, 771-774

TEXT: The system of the integral equations

$$G_\omega(r, r') = G_\omega(r, r') - \int \tilde{G}_\omega(r, s)\, \Delta_T(s)\, \tilde{G}_{-\omega}(l, s)\, \Delta_T^*(l)\, G_\omega(l, r')\, d^3l\, d^3s; \quad (3)$$

$$F_\omega^+(r, r') = \int \tilde{G}_{-\omega}(s, r)\, \Delta_T^*(s)\, \tilde{G}_\omega(s, r')\, d^3s - \int \tilde{G}_{-\omega}(s, r)\, \Delta_T^*(s)\, \tilde{G}_\omega(s, l)\, \Delta_T(l)\, F_\omega^+(l, r')\, d^3s\, d^3l. \quad (4)$$

where $\tilde{G}(\vec{r}, \vec{r}')$ is the Fourier component of the Green function of electrons for ordinary metal, is derived from the system of equations for the Fourier components of the Green temperature functions by introducing $\tilde{G}(\vec{r}, \vec{r}')$.

$$\tilde{G}_\omega(r, r') = \exp\{ieA(r)(r - r')\}\, G_\omega^0(r - r'). \quad (5)$$

Card 1/3

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

S/020/62/145/004/012/024
B178/B102

Generalized equations of...

holds for ordinary metal without magnetic field. The exact equation for the energy gap is

$$g^{-1}\Delta_T^*(\mathbf{r}) = T\sum_\omega \int \tilde{G}_{-\omega}(\mathbf{s},\mathbf{r})\,\Delta_T^*(\mathbf{s})\,\tilde{G}_\omega(\mathbf{s},\mathbf{r})\,d^3\mathbf{s} -$$

$$-T\sum_\omega \int \tilde{G}_{-\omega}(\mathbf{s},\mathbf{r})\,\Delta_T^*(\mathbf{s})\,\tilde{G}_\omega(\mathbf{s},\mathbf{l})\,\Delta_T(\mathbf{l})\,F_\omega^+(\mathbf{l},\mathbf{r})\,d^3\mathbf{s}\,d^3\mathbf{l}. \qquad (6)$$

$$\left\{\frac{1}{2m}\left(\frac{\partial}{\partial\mathbf{r}} + 2ie\mathbf{A}(\mathbf{r})\right)^2 + \frac{1}{c}\left[D - g^{-1} + B\,|\Delta_T(\mathbf{r})|^2\right]\right\}\Delta_T^*(\mathbf{r}) = 0, \qquad (8)$$

$$B = -T\sum_\omega \int \tilde{G}^*_{-\omega}(\mathbf{r}-\mathbf{s})\,\tilde{G}^*_\omega(\mathbf{s}-\mathbf{l})\,F_\omega^0(\mathbf{l}-\mathbf{r})\,d^3\mathbf{s}\,d^3\mathbf{l},$$

$$C = T\sum_\omega \int \tilde{G}^*_{-\omega}(\mathbf{r}-\mathbf{s})\,(\mathbf{r}-\mathbf{s})^2\,\tilde{G}^*_\omega(\mathbf{s}-\mathbf{r})\,d^3\mathbf{s}, \qquad (9)$$

$$D = T\sum_\omega \int \tilde{G}^*_{-\omega}(\mathbf{r}-\mathbf{s})\,\tilde{G}^*_\omega(\mathbf{s}-\mathbf{r})\,d^3\mathbf{s}.$$

Card 2/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

is obtained by separating the exponents in (5). In order to clarify the significance of Δ_T, the quantities B, C and D are substituted in (8) where $\vec{A}(\vec{r}) = 0$, $\Delta_T(\vec{r}) = \text{const.}$:

$$g\,\frac{N(T)}{2}\int_{-\tilde{\omega}}^{\tilde{\omega}} \frac{\operatorname{th}\sqrt{\varepsilon^2+\Delta_T^2}/2T}{\sqrt{\varepsilon^2-\Delta_T^2}}\,d\varepsilon = 1, \qquad (13)$$

is obtained and with $\Delta_0 = 2\tilde{\omega}\exp(-2/gN(0))$, $\Delta_0 = \pi T_c/\gamma$, after some further simplifications ($\Delta_T \sim \Delta_c$)

$$\left\{\frac{1}{2m}\left(\frac{\partial}{\partial r} + 2ieA(r)\right)^2 + \frac{\Delta_T^2}{\varepsilon_F}\left(1 - \frac{|\Delta_T(r)|^2}{\Delta_T^2}\right)\right\}\Delta_T^*(r) = 0. \qquad (14')$$

is obtained instead of (6). This relation holds for all temperatures down to T=0.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

PRESENTED: March 13, 1962, by N. N. Bogolyubov, Academician

SUBMITTED: March 12, 1962

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.P.; KADMENSKIY, S.G.

Superfluidity of nuclear matter. Zhur. eksp. i teor. fiz. 40 no.1:183-193 Ja '61. (MIRA 14:6)

1. Voronezhskiy gosudarstvennyy universitet.
(Superfluidity)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L. P.

"Dynamics of the Population of Voles in the Cultivated Lands of Central Tyan'-Shan' in Connection with the Epidemiological Significance of These Animals."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Kirghiz Republic Anti-Plague Station, Frunze

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PROPESHNAYA, T.L.; RAPOPORT, L.P.; YEVDOSHENKO, V.G.; KICHATOV, E.A.

Data for a study of natural foci of Q fever in Kirghizistan.
Zhur.mikrobiol.epid.i immun. 31 no.9:32-37 S '60. (MIRA 13:11)

1. Iz Kirgizskogo instituta epidemiologii, mikrobiologii i gigiyeny i Kirgizskoy protivochumnoy stantsii.
(KIRGHIZISTAN--Q FEVER)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, L.E.

25(3) PHASE I BOOK EXPLOITATION SOV/1672

USSR. Upravleniye po organizatsii i mekhanizatsii ucheta

Mekhanizatsiya ucheta i vychislitel'nykh rabot na promyshlennom predpriyatii; sbornik statey (Mechanization of Accounting and Computing Operations in an Industrial Establishment; Collection of Articles) Moscow, Gosstatizdat, 1957. 125 p. 5,100 copies printed.

Additional Sponsoring Agency: USSR. TSentral'noye statisticheskoye upravleniye.

Ed.: V.A. Ustiyants; Tech. Ed.: A.A. Kapralova.

PURPOSE: This book is intended for technical personnel servicing computers, tabulators, punch card machines, etc., and for those using this equipment.

COVERAGE: This collection of articles reviews various aspects of mechanical invoicing, use of key-operated calculators in accounting, functions of interplant clearing houses, accounting of state taxes using business machines and computers, and operation of punch card machines. Technical features of computing and calculating are discussed and some measures to improve reliability are outlined. No personalities are mentioned. There are 8 Soviet references.

TABLE OF CONTENTS:

Lazarev, V., and A. Safonov. For Further Improvement of the Mechanization of State Tax Accounting 32

Potekhin, S. Methods of Perforation Control 40

Isakov, V. On Perforation Control Methods 53

Rapoport, L.E. Effectiveness of Mechanized Engineering and Technical Calculations 56

Rappoport, M. Technique of Calculating Finite Differences on Computing Machines 80

Khusainov, B. Compilation of Calibrating Tables on Tabulating Machines (Experience of the Computing and Business Machine Service Center of the Novo-Ufimskiy neftepererobatyvayushchiy zavod- New Petroleum Refinery at Ufa) 109

Tikhomirov, Yu., and N. Kotov. Automatic Stopping of the Tabulator and Switching on of a Light Signal With the Appearance of a "Short" in the Tabulator and the Totaling Perforator 120

Pokin, N. Modernization of the Totaling Perforator for the T-4MI Tabulator 123

AVAILABLE: Library of Congress (HF5679.R8)

JG/bg
8-5-59

Card 4/4

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 22286-66 EWP(j)/EWT(m) IJP(c) RM/WW

ACCESSION NR: AP6006491 SOURCE CODE: UR/0138/65/000/010/0008/0011

AUTHOR: Apukhtina, N. P.; Boyarchuk, Yu. M.; Rappoport, L. Ya.; Mazur, L. Yu.; Mozzhukhina, L. V.

ORG: All-Union Scientific-Research Institute of Synthetic Rubber im. S. V. Lebedev (Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka)

TITLE: Study of the process of cross-linking of urethan polymers under the influence of atmospheric moisture

SOURCE: Kauchuk i rezina, no. 10, 1965, 8-11

TOPIC TAGS: polymer, vulcanization, reaction rate, chemical reaction, elastomer, moisture measurement

ABSTRACT: The authors made an attempt to study in more detail the process of cross-linking of urethan elastomers during storage in contact with atmospheric moisture. The results obtained show that polymer moisture absorption proceeds nonuniformly, but in relation to the variations in the moisture content of the medium. The nature of the cross-linking process of the polymer is independent of both the moisture content of the medium and of the polymer. The temperature-dependence of the reaction rate of the NCO-group with atmospheric moisture is established and an approximate value of the activation energy of the reaction is calculated. It is found that the interaction of the isocyanate groups of the

Card 1/2 UDC: 678.664:678.028:28:678.019.32

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 22286-66

ACCESSION NR: AP6006491

polymer with atmospheric moisture proceeds considerably faster than the process of cross-linking. Orig. art. has: 7 figures, 1 table, and 7 formulas.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 004

Card 2/2 nst

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

RAPOPORT, M

BC

A-4

New serological reaction in diagnosis of syphilis. P. Grigoriev and M. Rapoport (Acta med. U.R.S.S., 1938, 1, 230—245).—A modification of the Grigoriev-Rapoport reaction is described.

T. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

114

Treatment of eclampsia with magnesium sulfate. M. A. Rapoport. Kazan. *Med. Zhur.* 34, 508-12(1938); *Chem. Zentr.* 1939, I, 4499.—A review. Treatment of eclampsia with intramuscular injections of a 25-30% soln. of $MgSO_4$ was found to be beneficial. M. G. Moore

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

Alkylation of the pure molecule. M. A. Rapoport (*C. R. Acad. Sci. U.R.S.S.*, [illegible], [illegible], 1169—1180).—The incidence of lethal mutations of *Drosophila* is raised, by exposure of the pupae or imagos to diazomethane, from a normal value of 0·2% to 1·5—3·7%; nitrosomethylurethane, ethyl diazoacetate, and dimethyl trifluoroborate give 1·2—1·6% of lethal mutations. R. Truscoe.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M. A.

"The finding of Salmonella in various forms of clinical diseases," Biologicheskiye Antiseptiki, pp 190-199, 1950.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M.A.

Analysis of bacteriological discoveries in dysentery. Zhur. mikrobiol. epid. i immun. no.6:66 Je '54. (MLRA 7:7)

1. Iz kafedry mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta i laboratorii infektsionnoy bol'nitsy im. Botkina
(SHIGELLA)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M.A.; MEKLER, S.S.; KISSEL'GOF, B.P.,

An effective simplified method for mass bacteriologic examinations for dysentery. Zhur. mikrobiol. epid. i immun. 27 no.2:69-71 F' 56. (MLRA 9:5)

1. Iz bol'nitsy imeni Botkina v Leningrade.
(DYSENTERY, BACILLARY, diag.
bacteriol. mass survey, simplified method)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M.A.

Simplified method for mass bacterilogical tests for dysentery. Report No.2. Trudy LSGMI 30:10-18 '56. (MIRA 10:8)

1. Laboratoriya bol'nitsy imeni Botkina (zav. laboratroiyey - prof. M.N.Fisher)
(DYSENTERY, BACILLARY, diagnosis,
bacteriol., simplified method for mass surveys (Rus))

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Country : USSR F
Category : Microbiology-Microbes Pathogenic for Man and Animal

Abs. Jour : Ref Zhur - Biol., No.19, 1958, 86122

Author : Rapoport, M.A.
Institut. : -
Title : The Use of Bile-Glycerine Agar for Mass Studies of Dysentery

Orig Pub. : Labor. Delo, 1957, No.5, 34-36

Abstract : Description is given of a method of identification of dysentery cultures chosen from elective media. It is noted that all cultures not belonging to the Shigella group, both forming and not forming gas in glycerine, must be tested for RA with a mixture of Salmonellosis sera. In the study of cultures not lysed by phage, it is necessary to set up a RA with a mixture of dysentery antisera. A conclusive diagnosis may be given within 48 hours of the initial seeding of the culture. - N.Ya.Boyarskaya. [RA probably means "agglutination test"]

Card: 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M.A., doktor med.nauk; MEKLER, S.S. (Leningrad)

A case of sporotrichosis caused by the fungus Sporotrichum beurmanni. (MIRA 12:3)
Vrach.delo no.1:1315 D '58.

1. Bakteriologicheskaya laboratoriya bol'nitsy imeni S.P. Botkina.
(SPOROTRICHOSIS)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M. A.

"On a simplifies method of mass bacteriological examination for dysentery."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAPOPORT, M.A.; MEKLER, S.S.

Further observations on the use of dishes with bile-glycerin agar for the identification of pathogens of acute intestinal diseases. Trudy LSGMI 46:185-192 '59. (MIRA 13:11)

1. Kafedra mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta i laboratoriya Bol'nitsy imeni S.P. Botkina (zav. kafedroy i laboratoyiyey - prof. M.N.Fisher).
(SHIGELLA) (SALMONELLA) (INTESTINES--DISEASES)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

AVDEYEVA, T.A.; RAPOPORT, M.A.; MUNITS, R.T.

Comparison of the results of standard and quantitative microbiological research methods in dysentery and the evaluation of possibilities of bacteriological diagnosis of dysentery in relation to the concentration of pathogens in the material under research. Trudy Len. inst. epid. i mikrobiol. 24:141-145 '63. (MIRA 18:10)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

CA

Silicon monoxide. M. S. Beletskii and M. B. Rapoport. *Doklady Akad. Nauk S.S.S.R.* 72, 699-701(1950).—The existence of SiO in the solid state was established by the x-ray pattern of the product of reduction in vacuo of SiO_2 by C or Si at 1800° or above, or of the product of reduction of a mixt. of SiO_2 and Al_2O_3 under the same conditions. The substance appears as a condensate of yellowish brown color. Its refractive index is 1.92-1.91, the d. 2.13. The crystal lattice is cubic, $a = 5.16$ A. No other interferences appear in the pattern. If there are 4 mols. per unit cell, the exptl. d. of 2.13 gives a mol. wt. of 44.3. The prepns. investigated by Baumann (C.A. 35, 5035[5]) and by Inuzuka (C.A. 30, 4001) were not SiO but a mixt. of Si and SiC.

N. Thon

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

CA

4

The aluminum compound formed at high temperatures. M. S. Beletskii and M. B. Rapoport. *Doklady Akad. Nauk S.S.S.R.* 80, 751-4(1951). A low oxide of Al is formed in the reduction of Al_2O_3 mixed with SiO_2, by C above 1800° under low pressure (1 mm. Hg), in the form of thin long crystals. Coarse crystals of the same phase are obtained on heating a pelleted mixt. of Al and Al_2O_3 above 1800° under 1 mm. Hg, or under atm. pressure on heating to 1900-2000° in a tubular furnace sealed at one end, in an atm. poor in air and consisting mainly of CO. The light-blue crystals form some 10-15 mm. above the pellets, which means that they crystallize from the vapor phase. The crystals contain no Al_4C_3 nor Al_3C_4N. They appear as needles and dendrites of hexagonal prisms, ending in hexagonal pyramides. The refractive indexes are $n_\gamma = 2.19 \pm 0.03$, $n_\alpha = 1.13 \pm 0.02$. By x-ray diffraction, the crystals are close packed hexagonal, $a = 3.10 \pm 0.01$, $c = 4.99 \pm 0.01$ A., space group D_{6h}, C_{6v}, or D_{6h}. The pycnometric d. is 2.74, i.e. considerably smaller than that (3.05, or 3.26, depending on the authors) of AlN, which has lattice parameters very close to the above. Absence of AlN in the low oxide was confirmed analytically. This oxide does not react with H_2O or with boiling HCl or H_2SO_4, but reacts slowly with hot alkali. On heating in air to 1000-1100°, the surface becomes covered with Al_2O_3. From the d. and the x-ray data, the mol. wt. is 69.74, i.e. close to the compn. Al_2O_3, the no. of mols. in the elementary cell is 1. This, however, is inconsistent with any of the 3 space groups possible on the basis of the x-ray analysis, which calls for 2 mols. in the elementary cell. The contradiction remains unexplained. N. Thon

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

USSR/Metals - Aluminum, High Temperature 22 Oct 51

"Study of Aluminum Compound Forming at High Temperatures," M. S. Beletskiy, M. B. Rapoport, All-Union Aluminum-Magnesium Inst

"Dok Ak Nauk SSSR" Vol LXXX, No 5, pp 751-754

During experimentation for reducing Al_2O_3 with C at temps above 1,800° in vacuo, unknown compd in shape of thin elongated crystals of blue color was observed. It contained considerable amt of Al, did not react with water or acids, only reacting slowly on heating with alkali. Density was found equal to 2.74. Mol wt 69.94 suggests compd of Al_2O type. Complete chem

221T7

analysis was not possible due to small amt of substance obtained. Submitted by Acad D. C. Belyankin 20 Aug 51.

221T7

RAPOPORT, M. B.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

AID 436 - I

RAPOPORT, M. B.

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

PHASE I

Call No.: TN775.B337

BOOK

Authors: BELYAYEV, A. I., RAPOPORT, M. B. and FIRSANOVA, L. A.

Full Title: ELECTROMETALLURGY OF ALUMINUM

Transliterated Title: Elektrometallurgiya alyuminiya

Publishing Data

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Literature on Ferrous and Nonferrous Metallurgy

Date: 1953 No. pp.: 720 No. of copies: 4,500

Editorial Staff

Reviewers: Garbarchuk, G. I., Winner of Stalin Prize and Sushkov, A. I., Engineer

The authors express their thanks to Prof. Dr. V. A. Pazukhin, Prof. E. I. Zhukovskiy, Eng. A. I. Sushkov, Eng. G. I. Garbarchuk, Eng. B. I. Itsykson and P. K. Kovshikov.

Text Data

Coverage: This is a fundamental study of the modern development of aluminum alloy electrometallurgy. It gives a detailed analysis of the theory and practice of the electrolytic production of cryolite aluminum alloys, the electrolytic refining of aluminum and the production of aluminum-silicon alloys in electric furnaces. Design of reduction plants and calculation

1/10

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

of aluminum baths and electric furnaces for melting aluminum-silicon alloys are briefly discussed. The theoretical part is based mainly on Soviet sources which, in the authors' opinion, by far excel in scope and scientific value the non-Russian literature on the electrometallurgy of aluminum. The practical conclusions are drawn from the achievements of the aluminum industry in the USSR, according to the authors' note in the preface. In the text, however, no reference is made to any installation in operation now in the Soviet Union.

The authors have collected in a single volume a large amount of information from the very extensive and extremely scattered references on the subject treated. The book is written in an easy, comprehensive language, is provided with numerous illustrations and diagrams, and gives a good picture of the methods used in electrolytic production of aluminum in the Soviet Union at the present time.

TABLE OF CONTENTS

	PAGE
Foreword	8
Introduction	9

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PAGE

SECTION I ELECTROLYSIS OF MOLTEN CRYOLITE ALUMINA

Ch. I Properties of Aluminum
1. Structure of the atom and crystal lattice 17
2. Physicochemical properties 21
3. Thermochemical properties 32
Ch. II Properties of Alumina
4. Structure of the crystal lattice 34
5. Physicochemical properties 35
6. Thermochemical properties 42
Ch. III Properties of Carbon
7. Structure of aluminum crystal lattice 45
8. Physicochemical properties 47
9. Oxidation 53
Ch. IV Properties of Aluminum Fluorides and Fluorides of other Metals
10. Structure 56
11. Physicochemical properties 61
12. Thermochemical properties 67
Ch. V Properties of Systems formed by Aluminum Fluoride and Fluorides of other Metals
13. Systems: Aluminum fluoride - fluorides of alkali metals 70

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PAGE

14. Systems: Cryolite - fluorides of alkali metals 80
15. Systems: Cryolite - fluorides of bivalent metals 81

Ch. VI Properties of Systems formed by Fluorides and Oxides

16. Systems: Cryolite - alumina 88
17. Systems: Cryolite - oxides 96
18. Ternary and binary systems formed by fluorides and oxides 99

Ch. VII Theory of Electrolysis of Cryolite Alumina Smelts

19. Decomposition voltage of cryolite alumina and electrolyte components 115
20. Structure of molten cryolite alumina 132
21. Process of current transfer in aluminum baths 135

Ch. VIII Electrolytic Processes at Electrodes in Aluminum Baths

22. Processes at cathodes 143
23. Processes at anodes 157

Ch. IX Output of Molten Cryolite-Alumina per amp. and kw/hr

24. Basic conceptions and mathematical relations 179
25. Effect of various factors 187

Ch. X Construction of Aluminum Baths

26. Development of aluminum baths construction 194
27. Modern aluminum baths 198

Ch. XI Design of Aluminum Baths

28. General design 206

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

PAGE

29. Electrical design 216
30. Thermal design 224
31. Material design 229
32. Example of design 229

Ch. XII Mounting of Aluminum Baths

33. Materials used 246
34. Sequence of mounting operations 253

Ch. XIII Starting Operation of Aluminum Baths

35. Starting new baths with a continuous anode 259
36. Starting baths after major repairs 265
37. Starting multi-anode baths 266
38. Period of operation following the start 269

Ch. XIV Operation of Aluminum Baths

39. Materials for baths 275
40. Operations and Maintenance 276
41. Organization of working crew 306
42. Control of production in the electrolytic shop 308

Ch. XV Life of Aluminum Baths and their Demounting

43. Effect of various factors on the life of aluminum baths 310
44. Sequence of operations in dismounting aluminum baths 320

Ch. XVI Regeneration of Electrolyte in Aluminum Baths

45. Carbon film flotation 324

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013442