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L 28537-66

ACC NR: AT6013804

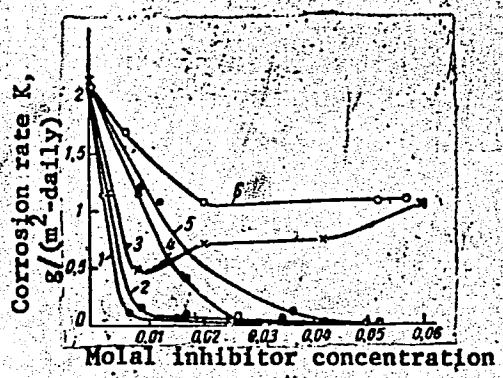

Fig. 1. Metal corrosion rate as a function of inhibitor concentration in solution containing 30 mg/liter NaCl and 70 mg/liter Na_2SO_4:

1 - trisodium phosphate; 2 - sodium tungstate; 3 - monosubstituted sodium phosphate; 4 - disubstituted sodium phosphate; 5 - sodium molybdate; 6 - sodium vanadate

SUB CODE: 11, 07 SUBM DATE: 19Jul65/ ORIG REF: 005/ OTH REF: 006

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L 28531-66 EWP(j)/EWT(m)/T/EWP(t)/ETI IJP(c) RM/WW/JD/WB/GD

ACC NR: AT6013801 (N) SOURCE CODE: UR/0000/65/000/000/0220/0241

61
60
B+1
15

AUTHOR: Rozenfel'd, I. L.; Zhigalova, K. A.; Bur'yanenko, V. N.

ORG: none

TITLE: Physico-chemical and protective properties of polymer film-based paints and lacquers

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2. Moscow, Izd-vo Metallurgiya, 1965, 220-241 16

TOPIC TAGS: alkyd resin, vinyl chloride, vinylidene chloride, nitrocellulose, polymer, copolymer, electrolyte, specialized coating, permeability measurement/ FL-02 alkyd resin, SVKh-40 vinyl chloride-vinylidene chloride copolymer, NTs nitrocellulose

ABSTRACT: The available information on the mechanism of the protective properties of polymeric coatings is extremely limited despite the large number of studies on this subject. To fill this gap, and considering that valuable data on these properties can be obtained by investigating the penetrability of electrolytes through free films, the authors investigated the ionic permeability of various nonpigmented films and their electric properties of electrolytes. The specimens used were varnish films obtained on the basis of alkyd resin (FL-02), vinyl chloride-vinylidene chloride copolymer (SVKh-40) and nitrocellulose, deposited with a spray gun on a material of specific viscosity. Ohmic resistance and capacitance were measured in the presence of alter-

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ACC NR: AT6013801

nating current with voltage of 20-25 mv and frequency of 500 to 20,000 cps, while the diffusion potentials and the current passing through the film on the application of a constant potential were determined in glass cells consisting of two halves filled with 0.5N NaCl solution between which the investigated film was placed: the rate of motion of ions across the film, considered as a semipermeable membrane, can be determined according to the intensity of the current passing through the electrolytic cell on the application of a specific potential difference between two electrodes. It was found that the films investigated differ in the nature of their electrolyte conductivity: for nitrocellulose and alkyd resin-based films penetration of the electrolyte occurs via the pores, while for the copolymer SVKh-40 it occurs via the material itself. Moisture absorption by a film on metals and its permeability to an electrolyte can be determined from the magnitude and pattern of variation of its capacitance and ohmic resistance: thus, nitrocellulose is the most porous of the coatings investigated and hence its capacitance is the highest while its ohmic resistance is the lowest: this also may be used as a criterion for predicting the future behavior of the investigated material under specified conditions. Orig. art. has: 14 figures, 6 tables and 8 formulas.

SUB CODE: 11, 07 / SUBM DATE: 19Jul65/ ORIG REF: 023/ OTH REF: 014

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

L 28529-66 EWP(j)/EWT(m)/EWP(t)/ETI IJP(c) RM/JD/WB/GD

ACC NR: AT6013803 (A) SOURCE CODE: UR/0000/65/000/000/0284/0295

AUTHOR: Rozenfel'd, I. L.; Persiantseva, V. P.; Reyzin, B. L.; Shustova, Z. F.; Gavrish, N. M.

ORG: none

TITLE: Investigation of certain nitrobenzoic amine salts as corrosion inhibitors for ferrous and nonferrous metals

SOURCE: Korrosiya metallov i splavov (Corrosion of metals and alloys), no. 2. Moscow, Izd-vo Metallurgiya, 1965, 284-295

TOPIC TAGS: amine salt, corrosion inhibitor, ferrous metal, nonferrous metal

ABSTRACT: The article presents the results of an investigation of the protective properties of certain inhibitors (nitro- and dinitrobenzoates) synthesized at the authors' laboratory; these properties were tested in natural as well as accelerated conditions involving cyclic and continuous exposure to moisture, with the aid of a specially developed device (Persiantseva, V. P., Rozenfel'd, I. L. Zavodskaya laboratoriya, 1958, 24, 7, 282). (The tests under natural conditions simulated the conditions under which metal products are stored in unheated warehouses and lasted for 21 months.) The inhibitors investigated were: hexamethyleneimine meta-nitrobenzoate, hexamethyleneimine ortho-nitrobenzoate, hexamethyleneimine 3,5-dinitrobenzoate, and piperidine 3,5-dinitrobenzoate. The coating of metal surface with

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an inhibitor was accomplished through adsorption from vapor phase or by washing the specimens in alcohol solutions of the inhibitors with subsequent drying at room temperature. Protective properties were determined according to the time elapsed until the appearance of first signs of corrosion and according to corrosion rate (as determined by gravimetric method). Findings: When applied in the form of alcohol solutions, all the four tested chemicals proved to be effective inhibitors of atmospheric corrosion under conditions simulating storage of metals in unheated warehouses, in industrial districts (where the atmosphere is more contaminated), for not only ferrous metals but also the most widely used nonferrous metals, (Cu and its alloys, Ag, Sn, Al and its alloys, Ni and Cr coatings, and Zn and Cd coatings passivated in a $K_2Cr_2O_7$ solution). These findings should represent a major advance considering that previously the only other known volatile inhibitors used in industry protected only ferrous metals. Orig. art. has: 7 tables and 1 figure.

SUB CODE: 11, 07 / SUBM DATE: 19Jul65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, I.M., professor (Leningrad)

Clinical evaluation of diseases of the inner ear according to their nomenclature. Vest.oto-rin. 18 no.4:37-44 Jl-Ag '56. (MIRA 9:9)
(LABYYINTH, diseases,
classif. (Rus))

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, I.M., prof. (Leningrad)

Some problems in tympanoplasty [with summary in English]. Vest. oto-rin. 20 no.1:31-34 Ja-F '58. (MIRA 11:3)

1. Iz Leningradskoy oblastnoy klinicheskoy bol'nitsy.
(EAR, MIDDLE, surg.
tympanoplasty, problems (Rus)

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ROZENFEL'D, I.M., professor

Diagnostic significance of reactive errors in otoneurology and otology [with summary in English]. Vest.oto-rin. 19 no.1:59-62 Ja-F '57 (MLRA 10:4)

1. Iz Leningradskoy oblastnoy klinicheskoy bol'nitsy.
(NYSTAGMUS,
Barany's sympt., diag. value of reactive errors) (Rus)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, I. M.

Rozenfel'd, I. M. and Yarkhova, M. P. "Some features of the pathology of (lor)-organs in war invalids," Trudy Leningr. obl. gospitalya dlya lecheniya invalidov Otechestv. voyny, Leningrad, 1948, p. 167-78

SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Statey, No. 5, 1949)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, Iosif Mikhaylovich

[First aid in diseases and injuries of the ear, upper respiratory organs, and esophagus] Neotlozhnaia pomoshch' pri zabolevaniiakh i travmakh ukha, verkhnikh dykhatel'nykh putei i pishchevoda. Leningrad, Medgiz, 1958. 78 p. (MIRA 12:4)

(OTORHINOLARYNGOLOGY)
(ESOPHAGUS--DISEASES)

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FURMAN, M.S., doktor khim.nauk; GOL'DMAN, A.M., kand.nauk; OLEVSKIY, V.M., kand.tekhn.nauk; RUCHINSKIY, V.R.; Prinimali uchastiye: ROZENFEL'D, I.M.; LAVRICHENKO, A.A.; VAYSMAN, I.L.; ZHITNIKOVA, N.K.

Catalytic oxidation of cyclohexane by air under pressure by the continuous method. Khim.prom. no.4:265-272 Je '60. (MIRA 13:8)

(Cyclohexane) (Oxidation)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

AYZENVARG, Yefim Vladimirovich; RZHECHITSKIY, B.D., retsenzent; ROZENFEL'D, Kh.D., red.; MAKRUSHINA, A.N., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Textbook for operators of electric gantry cranes] Uchebnik dlia kranovshchika portal'nogo elektricheskogo krana. Moskva, Izd-vo "Rechnoi transport," 1959. 217 p. (MIRA 12:5)
(Cranes, derricks, etc.)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

VEREIN, A., inzh.; CHERPAKOV, B., inzh.; ROZENFEL'D, L., inzh.

A plant of automatic factories. IUn.tekh. 6 no.3:38-43 Mr '62. (MIRA 15:4)

(Moscow--Machinery industry) (Assembly-line methods)

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24890

S/109/61/006/008/010/018
D207/D304

24.8300

AUTHORS: Der-Shvarts, G.V., Kushnir, Yu.M. Rozenfel'd, L.B., Zaytsev, P.V., Bezlenkin, S.V., Trutneva, I.S., Belenkiy, S.A., Titov, L.A.

TITLE: Certain problems of reflex electron microscopy

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961, 1358 - 1364

TEXT: This paper was presented at the 3rd All-Union Conference on electron microscopy, Leningrad, October 1960. The present article describes an electron reflex microscope based on the design by Ch. Fert, R. Marty, P. Saporte (Ref. 1: C. r. Acad. Sci. 1955, 240, 20, 1975) who have shown that by tilting the illumination system by 15 - 20° in a reflex microscope, a good image may be obtained with small deformation of the scale and a large useful image area. The main deficiency of such a system in an electron microscope is the chromatic aberration; the aberration can be reduced, by reduc-

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ing the diaphragm aperture of the objective which in turn reduces considerably the picture illumination. In the described microscope the increased illumination was obtained by designing a more effective electron gun and by utilizing a light intensifier. Since the definition of a reflex microscope is determined by the diaphragm of the objective, which means that in an electron microscope the efficiency of the electron gun is determined not by electron brightness but by the current density of the sample, several types of gun were investigated; it was found that triple electrode guns of special construction produce a much greater current density than the standard guns normally used in electron microscopes. The special feature of such a gun is the conical shape of the focussing electrode. The dependence of current density j at the cross-over point of the anode current was determined for electrode angles α of 60°, 90° and 120° with depth of penetration h of the tip of the cathode filament (filament dia. 0.12 mm) with respect to the cone apex, as a parameter for maximum current density at U = 60 kV. The temperature of the cathode was 2800°K. The optimum results obtained are

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shown. For an electrode with angle $\alpha = 120^{\circ}$, h = 0.5 mm; for $\alpha = 90^{\circ}$ and 60°, h = 1.5 mm. For comparison j = f(Ia) is also drawn for the normal electron gun УЭМ-100 (UEM-100), in which the tip of the filament is 0.75 mm above the focussing electrode. It may be seen that for $\alpha = 120^{\circ}$ the current density is increased by approximately 4.6 times with a current of 250 μA and 7 times with a current of 500 μA. The electron gun is mounted in the illumination system of the microscope. The gun is introduced through a jacketed port and can be mechanically rotated through any angle from 0° to 22° measured on a vernier scale. The electron optical magnification of the microscope is x2500, resolution about 500 Å. The authors also undertook theoretical analysis of the influence on the finition of imperfect assembly and shape of magnet cores. Since the picture is formed by electrons undergoing considerable decelerations, the axial deformation of the magnet slots and errors in their axial positioning produce a constant magnetic field near the axis and perpendicular to it. Such a field has analyzing properties and may introduce chromatic aberration. The evaluation of such aberrations requires the determination of the corresponding pertur-

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bation potentials, normally evaluated by Bertein's method. It may be shown, however, that this method does not determine the exact boundary conditions necessary for solving the problem of the Laplace equation for perturbation potentials. This problem may be solved exactly only when it is assumed that the perturbation is very small. The modified Mathieu functions may be then reduced to the sums of Bessel functions, whose terms are multiplied by the parameter of the Mathieu equation. In their analysis the authors concluded that there is no general method for evaluating the perturbation potentials and used the integral of an ordinary layer to determine them in the near axial region. The details of the analysis are not given. The poles used had the geometrical form with s/d ratio of 1.5 [Abstractor's note: Symbols d and s not defined]. The authors also investigated the filter lenses in an attempt to increase the resolution of the reflex microscope. In their analysis [Abstractor's note: Details not given] they used the mathematical model of single electrostatic lenses of W. Glaser and P. Schiske (Ref. 13: Optik, 1954, 11, 9, 422; 1954,11, 10, 455; 1955, 12, 5, 233) and of R. Rüdenberg (Ref. 14: J. Franklin Inst. 1948, 246, 4,

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Certain problems of reflex ...

311, 246, 5, 377). The analysis showed [Abstractor's note: Details not given] that the resolution of the lens is basically limited by the fact that non-axial achromatic electrons are being focussed in different planes. With an energy spread of electrons of the order of 5-6 eV a background is, therefore formed in which the picture disappears. There are 10 figures, 5 Soviet-bloc and 9 non-Soviet-bloc references. The references to the 4 most recent English-language publications read as follows: M.E. Haine, P.A. Einstein, Brit. J. Appl. Phys 1952, 3, 2, 40; P.A. Sturrock, Philos. Trans. Roy Soc. London, A. 1951, 243, 368, 387; G.D. Archard, J. Scient. Instrum. 1953, 30, 10, 353; R. Rudenberg, J. Franklin Inst., 1948, 246, 311; 246, 5, 377.

SUBMITTED: February 7, 1961

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.B.; KUSHNIR, Yu.M.; ZAYTSEV, P.V.; TITOV, L.A.; BEZLEPKIN, S.V.; POLYAK, E.V.

Reflecting electron microscope adapted for studying various objects during deformation. Izv. AN SSSR. Ser. fiz. 27 no.9:1184-1187 S '63. (MIRA 16:9)

(Electron microscopy)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ACC NR: AP6029900 SOURCE CODE: UR/0413/66/000/015/0063/0064

INVENTOR: Kushnir, Yu. M.; Rozenfel'd, L. B.; Der-Shvarts, G. V.; Kagan, N. B. 38 B

ORG: none

TITLE: Microscope of the ion emission type. Class 21, No. 184366

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 63-64

TOPIC TAGS: microscope, field emission microscope, ion emission

ABSTRACT: The proposed microscope of the ion emission type contains an axisymmetric electrostatic optical system, a diaphragm, a device for separating ions of specific mass from the ion beam, an ion collector, such as the first dynode of a secondary electron multiplier, an amplifier, and a recording unit (see Fig. 1). To increase microscope resolution and to make possible the observation of the distribution of various chemical elements on the surface of the sample, a scanning system, synchronized with the control unit and admitting through the diaphragm an enlarged ion image for every element, is used in the microscope. For the same purpose, the device which

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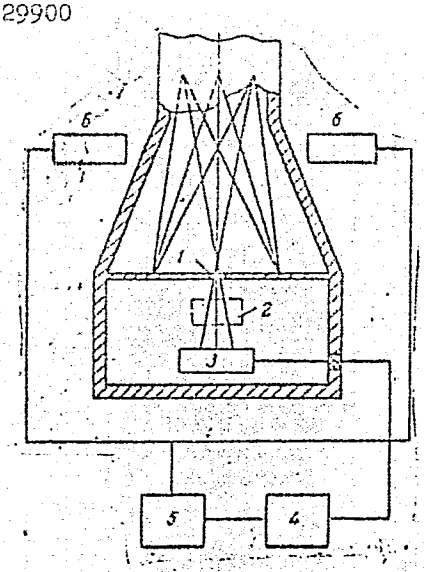

Fig. 1. Ion emission microscope

1 - Diaphragm; 2 - system for separating ions of specific cross from the ion beam; 3 - ion collector; 4 - amplifier; 5 - recording unit; 6 - scanning system.

separates the ions of specific mass from the ion beam is placed between the diaphragm and the ion collector. Orig. art. has: 1 figure. [JR]

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

L 27544-66 EWT(1) IJP(c) AT

ACC NR: AP6007506 SOURCE CODE: UR/0109/66/011/002/0287/0290

45
B

AUTHOR: Rozenfel'd, L. B.; Kagan, N. B.; Kushnir, Yu. M.

ORG: none

TITLE: Investigation of the energy spectra of ion-electron emission in an emission-type electron microscope

SOURCE: Radiotekhnika i elektronika, v. 11, no. 2, 1966, 287-290

TOPIC TAGS: electron microscope, energy spectrum, ion bombardment

ABSTRACT: The results are presented of an experimental investigation of the energy spectra of secondary electrons arising from the bombardment of specimens by a positive-ion beam, in an electron emission microscope. Energy spectra of W, Mo, Ta, Ti, Ni, brass were studied (preheated to 200—300C); bombardment by ions of air, He, A with energies of 5—10 kev; primary-beam angle, 6—16°. It was found that the minimum energy spread of the secondary electrons occurred with the lowest (5 kev) primary energy and the greatest (16°) grazing angle. Orig. art. has: 5 figures.

SUB CODE: 09 / SUBM DATE: 08Jun63 / ORIG REF: 001 / OTH REF: 004

UDC: 537.533.35

Card 1/1 BLG

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

S/048/61/025/006/010/010
B117/B212

AUTHORS: Rozenfel'd, L. B. and Makarov, A. I.

TITLE: Ion-optical production method of stops with small apertures

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 6, 1961, 754 - 756

TEXT: The present paper has been presented at the 3rd All-Union Conference of Electron Microscopy, held in Leningrad from October 24 to 29, 1960. The authors report on a simple device developed by them to drill holes by using focused ion beams. The device is easy to adjust and is able to drill holes of 2 - 3 μ diameter to tenths of a millimeter in various materials relatively fast. The ion source used (Fig. 1) is based on the principle of a canal-ray gas discharge ion source and consists of: 1) plate; 2) cathode; 3) casing; 4) insulator; 5) cable connecting discharge space and vacuum; 6) rubber seal; 7) seal fastener; 8) workpiece. The plate-cathode gap is usually adjusted to 0.25 - 2.5 mm. The pressure in the

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discharge space is kept at ~10^{-1} mm Hg. The self-sustained gas discharge takes part only in the region close to the axis, and the electrode system used causes a self-focusing of the ions. Thus the ion beam is focused to a thin thread. The aperture of the beam is very small, and after the beam has penetrated a surface of minimum cross section, it is spread only little. This makes it possible to drill dielectrics located behind the opening of the cathode stop. Fig. 2 shows the diagram of such a drilling device. The drilling of a hole can be observed through a glass window. The initial diameter of the hole is 2 - 3, and increases if the device is not turned off. The size of the diameter is a function of the operating time of the device. It can be evacuated with any forepump (for instance, -461 (VN-461)). The ion source is fed by a simple rectifier with an output voltage of ~ 12 - 25 kv and a current of 2 ma. It is not necessary to filter or stabilize the voltage. A limiting resistor BC-10-100 (VS-10-100) kilohm is used to stabilize the discharge current. The ion source described can be used to drill holes into various materials. The results, which do not present any limiting values of the drilling velocity, are compiled in the accompanying table. The velocity increases

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as the voltage and current increase but is limited by the spread parameter of the ion source, and is also a function of the material and thickness of the workpiece. Also the quality of drilling is a function of the material. Stops manufactured by the method described are used for various electronic devices, e. g., electron microscopes. N. M. Popov is mentioned. The authors thank Yu. M. Kushnir for interest and G. V. Der-Shvarts for suggestions. There are 2 figures, 1 table, and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

Fig. 1

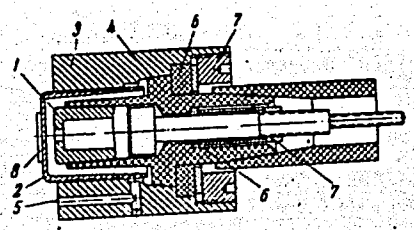

Fig. 1.

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Ion-optical production method...

Fig. 2: Schematic representation of the drilling device.
Legend: 1) ion source;
2) workpiece; 3) glass window;
4) vacuum pump; 5) needle cock;
6) high-voltage rectifier;
7) cover.

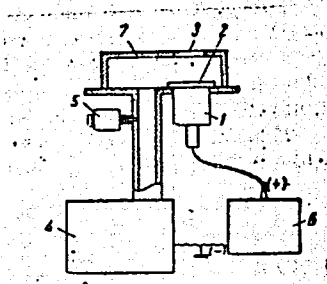

Fig. 2

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Ion-optical production method...

Table. Legend:
1) material;
2) thickness, mm;
3) voltage at the ion source, kv; 4) discharge current μa;
5) drilling time;
6) drilling-out time; 7) hole diameter;
8) tantalum;
9) nichrome;
10) molybdenum;
11) steel 1Х18Н9Т (1Kh18N9T);
12) diamond.

Материал 1	Толщина, мм 2	Напряжение на пушке, kV 3	Ток разряда, μA 4	Время сверления 5	Время рас. сверливания 6	Диаметр отверстия, μ 7
8 Тантал	0,075	15,5	440	7 мин 20 сек	10 сек	14
	0,075	15,5	440	7 мин 5 сек	18 сек	21
9 Нихром	0,03	15	100	1 мин 40 сек	30 сек.	28
10 Молибден	0,06	19,5	160	4 мин 50 сек	2 мин	40
11 Сталь 1Х18Н9Т	0,2	13	180	52 мин	30 сек	7
12 Алмаз	0,5	20	200	38 мин		40

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1ST AND 2ND ORDERS

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Ca

Variations with age in the contents of cholesterol and saturated and unsaturated phosphatides in the central nervous system of rabbits. L. B. Rozenfel'd and L. I. Lando. *Biokem. J.* (Ukraine) 16, 483-94 (in Russian, 495; in English, 495) (1940).—There is a gradual increase of cholesterol from the av. 5.61% of the dry wt. of the brain in rabbits 2-6 days old (total brain 1.40 g.) to 6.74% of the gray, and 12.71% of the white matter in those 90-150 days old (total brain 5.08 g.); the adult brain is 6.33 g.). The av. P of the unsatd. phosphatides is 0.270-0.416% of the gray, and 0.270-0.604% of the white matter, resp.; it drops slightly in adults. The P of the satd. phosphatides follows the same curve. B. Gutoff

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Oxidation processes in the central nervous system during ontogenesis. I. Changes in catalase and peroxidase activity. L. E. Rozenfel'd and S. S. Gol'dman. *Biochem. J.* (Ukraine) 14, 125-41 (in Russian, 142-3; in English, 143-4) (1939).—In all regions of the rabbit brain the catalase activity decreases with the age of the embryo and shows an abrupt drop 14 to 25 days after birth. The peroxidase activity fluctuates much more, and a certain amt. of reciprocal behavior is noted between the levels of catalase and peroxidase activity. R. Levine

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Oxidation processes from the phylogenetic viewpoint. II. Dehydrogenases. L. E. Rozenfel'd and S. Ya. Goldman. *Biochem. J.* (Ukraine) 12, 369-80 (in Russian, 381-2; in English, 382-3) (1938); cf. *C. A.* 33, 6368.—The relative succinodehydrogenase activities of the livers of a no. of phyla are: rat and mouse 1, spring frog 13, winter frog 24, snail 36, mussel 46. The reduced and oxidized (in parentheses) glutathione contents are: rat 748 (34), mouse 793 (37), spring frog 499 (33), winter frog 394 (40), crayfish 1010 (32), snail 254 (41), mussel 840 (40), unio 174 (66) and *Anodonta* 257 (83) mg.-% dry wt. The ascorbic acid contents, in the same order, are: 8.09, 7.19, 0.85, 5.83, 4.44, 0.17, 7.44, 1.68 and 1.58 mg. per g. dry wt. *In vitro* data are recorded for tissue exts. of these animals, and for their livers, *in vivo*. Data are recorded for whole earthworms. B. C. P. A.

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Data for the study of oxidation processes from the phylogenetic point of view. I. L. E. Rozenfel'd and S. S. Gol'dman. *Biochem. J.* (Ukraine) 12, 111-26 (in Russian, 127-8; in English, 128-9)(1938).—Total tissue respiration was divided into the oxidone or dehydrogenase-mediated respiration and the remainder, which is catalyzed by the oxidases. The authors employed tissues from mammals, amphibians, crustaceans, mollusks and worms. In descending the phylogenetic scale the intensity of both types of respiration falls. In invertebrates the oxidase respiration constitutes a greater percentage of the total respiration than in vertebrates, exceeding in intensity the oxidone respiration. Succinodehydrogenase activity falls sharply in descending the phylogenetic scale. In invertebrates there is a reciprocal relationship between the activities of peroxidase and catalase. R. Levine

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CA

11A

Hormones and enzymes. I. Effect of some hormones on amylase. L. R. Rozenfel'd and T. P. Shesterikova. *Ukrain. Biokhim. Zhur.* 9, 741-8 (in French 749) (1936). *In vitro*, the activity of amylase subjected to the action of adrenaline, insulin and thyroidin does not change. In isolated liver, it remains unchanged under the action of insulin and thyroidin and is activated somewhat by adrenaline. *In vivo*, adrenaline and insulin activate the amylase of tissues, thyroidin causes no change.

E. E. Stefanowsky

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Hormones and enzymes. II. The influence of certain hormones on lipase. L. R. Rosenfel'd and T. P. Shesterikova. *J. Physiol.* (U. S. S. R.) 22, 480-94 (in English 494) (1937); cf. *C. A.* 31, 3081[8]. Adrenaline (I) and thyroidin (II) do not influence the activity of lipase *in vitro*, but activity is increased under the influence of insulin (III). The activity in isolated livers showed little change during passage of II and III, while I increased activity slightly. I inhibits the activity of lipase *in vivo* while II and III increase it. S. A. Karjala

11A

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A-3

Hormones and enzymes. I. Influence of certain hormones on amylase. L. E. Rozenfeld and T. P. Schesterikova (Ukrain. Biochem. J., 1936, 9, 741—749).—Adrenaline (I), insulin (II), and thyroxine (III) have no action on amylase *in vitro*. In the isolated liver, (II) and (III) have no action, but (I) has a slight activating effect. *In vivo*, (I) and (II), but not (III), produce activation.

F. A. A.

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11A

Nature of enzymes. II. Sulfatase. L. E. Rozenfel'd and A. A. Rukhel'man. *Biochem. J.* (Ukraine) 16, No. 1, 53-62 (in Russian, 62-3; in English, 63) (1940); cf. *C. A.* 34, 4083[1].—Digestion of sulfatase (from takadiastase) with a series of reagents in a substrate of K phenylsulfate proved definitely the presence of a CHO group (I) in the enzyme. R. and R. conclude that I is a component of the agon of the complex, and serves as a bond with the pheron; the inactivation is regarded as a disturbance of the bond. Dissocn. may take place during the investigation, and the somewhat different effect of the various reagents is due to simultaneous reactions between the agon and I and agon with the pheron. References. R. Gutoff

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ca

11 A

Data on the nature of enzymes. I. Amylase, pepsin. I. E. Rozenfel'd, A. A. Rukhel'man and A. A. Zhuravskaya. *Biochem. J.* (Ukraine) 13, 541-56(in Russian, 556-7; in English, 557-8)(1939). To det. the chem. nature of the active enzyme groups a series of expts. were conducted with amylase and pepsin. The reaction of amylase with NH_2OH and $PhNH_2$ leads to the conclusion that amylase contains an active aldo group. The possibility of coexistence of this group together with an acid-base group is not excluded. The aldo group was not found in pepsin. "False activation" was noticed when the substrate on being fixed by "third" substances is partially excluded from the sphere of reaction, giving an impression of high enzyme activity, whereas the enzyme actually hydrolyzes a smaller amt. of substrate. B. Guroff

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

Oxidation processes in the central nervous system during ontogenesis. II. Changes in the glutathione and ascorbic acid contents and in the oxidation-reduction potential. L. E. Rozenfel'd and S. S. Gol'dman. *Biochem. J.* (Ukraine) 14, No. 3, 459–75(in Russian, 475–7; in English, 477–9)(1940); cf. *C. A.* 34, 5510⁶.—Glutathione and ascorbic acid increase in the large hemispheres of rabbits in the first 5–6 days after birth, and decrease in the medulla from the moment of birth. From the 40th day there are only slight changes in the cerebellum and medulla. From the 90th to the 150th day the ascorbic acid remains unchanged in all brain regions except the white matter. The oxidation-reduction potential rises from birth to the 6th day, then falls, rising again from the 50th to the 150th day and falling abruptly in the adult stage. There is an increase in the catalase and peroxidase activities, of glutathione and ascorbic acid concn. on the 5th–8th day, possibly connected with the opening of the animals' eyes. The changes observed in 14th to 25th and 40th to 50th days may, likewise, be connected with the change from breast to mixed feeding. The oxidation changes are more gradual in the medulla and white matter, less so in the cerebellum, and very abrupt in the large hemispheres. Possibly there is a connection of these oxidation processes with the unequal stage of development of the regions at birth and the variety of the types of differentiation in the post-embryonic period and the intensity of growth. B. Gutoff

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A-4

Nature of enzymes. II. Sulphatase. L. E. Rosenfeld and A. A. Ruchelman (*Ukrain. Biochem. J.*, 1940, 13, 53—63).—Using K phenyl sulphate as substrate, the action of sulphatase is inhibited by K_2SO_4 and KCN, phenylhydrazine, and NH_2OH,HCl. It is concluded that sulphatase contains an aldehyde group. Similar work on amylase leads to similar results. E. M. W.

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A-4

Variations with age of cholesterol and saturated and unsaturated phosphatides in central nervous system of rabbits. L. E. Rosenfeld and L. I. Lando (*Ukrain. Biochem. J.*, 1940, 13, 483—498).—During development of the brain, an increase in the cholesterol content of the grey and, more especially, white substance, but only a slight increase in the phosphatides, occur. In adult animals, saturated and unsaturated phosphatides diminish. H. G. R.

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A-4

Oxidation processes in central nervous system during ontogenesis. II. Variations in glutathione and ascorbic acid contents and redox potentials. [illegible] and S. S. GOLDMAN (Ukrain. biokhim. Zh., 1939, 14, 459—479).—The reduced glutathione and ascorbic acid contents of all parts of rabbit's brain fall abruptly after birth to the 40th day, thereafter diminishing only very slowly with increasing age. In the case of the hemispheres, the initial abrupt fall is preceded by increase in these vals. to a max. on the 10th day of life. R. T.

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a-4

Nature of enzymes. I. Amylase and pepsin. L. E. Rosenfeld, A. A. Ruchelman, and A. A. Shubavska (Ukrain. Biochem. J., 1939, 13, 541—558).—Amylase is inactivated by aniline or NH_2OH; this effect is due to combination of these reagents with an aldehyde group necessary for activity of the enzyme. The activity of pepsin is unaffected by the above reagents. R. T.

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a-4

Oxidation processes, from the phylogenetic viewpoint. II. Dehydrogenases. L. E. Rozenfeld and S. J. Goldman (Ukrain. Biochem. J., 1938, 12, 369—[illegible]).—The relative succinodehydrogenase activity of the liver of a no. of phyla is: rat and mouse 1, spring frog 13, winter frog 24, snail 36, mussel 46. The [illegible] (in parentheses) glutathione contents are: [illegible], mouse 793 (37), spring frog [illegible] (38), winter frog [illegible] (40), crayfish 1019 (52), snail [illegible] (41), [illegible] (46), [illegible] 174 (66), anodonta [illegible] mg. % dry wt. The ascorbic acid contents, in the same order, are: 8·69, 7·19, 6·85, 5·83, 4·44, 6·17, 7·44, 1·[illegible], and 1·58 mg. per g. dry wt. E_H data are recorded for tissue extracts of these animals, and for their livers, *in situ*. Data are recorded for whole earthworms. R. T.

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a-4

Phylogenetic aspects of oxidation processes. I. L. E. Rosenfeld and H. S. Goldman (Ukrain. Biochem. J., 19[illegible], [illegible], 111–120).—The O_2 intake and succinic oxidase activity of the liver or hepatopancreas of a [illegible] in the white rat or mouse > [illegible] > [illegible] > snail > [illegible] order is found for [illegible] and [illegible]. The ratio of oxidone to oxidase activity changes from 4 : 1 to 2 : 3 in the same series. Data for whole earthworms are recorded. R. T.

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a - 4

Comparative biochemistry of muscle. I. Phosphagen in sea- and fresh-water Teleostei and Ganeidei. L. E. Rozenfeld and G. J. Bagdasarjantz. II. Nature of phosphagen in the Selachii. G. J. Bagdasarjantz (Ukrain. Biochem. J., 1956, 8, [illegible]).—I. The skeletal muscles of [illegible] and [illegible] contain 0.007—0.015% of creatinophosphoric acid (I). The P of (I) amounts to 3—5% of the inorg. and acid-labile P, significantly < that in the lower vertebrates. The creatine content of muscle of salt-water fish is < that of fresh-water fish. Sturgeon muscle does not differ from that of bony fish in creatine or (I) content.

II. Muscle of the shark and ray contains 0.013—0.035% of (I). An acid-labile P compound, probably argininophosphoric acid (II), is also present. The total amount of (I) and (II) in the shark is > that in the ray. F. A. A.

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ROZENFEL'D, L.

CA

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Extinguishing alcohol and oily liquids with oil foam. L. Rozenfel'd. *Caoutchouc and Rubber* (U. S. S. R.) 1937, No. 3, 28-33; *Khim. Referat. Zhur.* 1938, No. 6, 143.—It is recommended to form a suspension of 100 parts of oil (avtol T, avtol No. 10 or cylinder oil No. 2), 6 parts of grease and 15 parts of soda. The grease is mixed with water, and oil is added with const. mixing. To obtain 1 cu. m. of oil foam it is necessary to add 15 kg. of concd. H_2SO_4 (d. 1.84) to 100 kg. of the suspension. W. R. H.

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NIKIFOROV, I.; MAKAROV, A.; SMOLYAKOV, N.; SIPER, E.; MOGILA, V.; LARIN, M.; FILIPPOV, K.; TOKMAKOV, V.; BARANOVSKIY, V.; CHETVERIKOV, K.; POZNANSKIY, A.; SHUTOV, M.; ROZENFEL'D, L.; RUD', A.

Mechanization of waterproofing operations. Stroitel' 8 no.11: 15-20 N '62. (MIRA 16:1)

(Waterproofing--Equipment and supplies)

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ROZENFEL'D, L., prof., doktor tekhn.nauk

Using a lithium bromide absorption machine as a heat pump. Khol.tekh. 35 no.5:17-20 S-O '58. (MIRA 11:11)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti. (Hot-water heating) (Refrigeration and refrigerating machinery)

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ROZENFEL'D, L

Scattering of fast particles by nuclei. Usp. fiz. nauk 60 no.4:565-572 D '56. (MLRA 10:4)

(Particles, Elementary--Scattering)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

TSVETAYEVA, N.Ye.; ROZENFEL'D, L.A.

Investigating the β-radiation of Nb^{95} and Ce^{144} by absorption in the air. Zhur.eksp.i teor.fiz. 38 no.2:641-643 F '60. (MIRA 14:5)

(Niobium--Isotopes) (Cerium--Isotopes) (Beta rays)

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ROZENFEL'D, L. A.

82030

S/056/60/038/02/47/061
B006/B014

24.6800

AUTHORS: Tsvetayeva, N. Ye., Rozenfel'd, L. A.

TITLE: Investigation of the Beta Radiation of Nb^{95} and Ce^{144} by the Method of Absorption in Air

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 2, pp. 641 - 643

TEXT: The β-radiation of Nb^{95} has repeatedly been examined spectrometrically. The resulting energy values differ by up to 20%. The writers of the present "Letter to the Editor" studied this radiation by a method described in Ref. 5. The resulting absorption curve of β-radiation in air is illustrated in Fig. 1. It was obtained by a change in the atmospheric pressure between the counter (of the type T-25 БФЛ (T-25 BFL)) and the preparation within the range $\approx$ 0 and 800 torr. The empirical function $K(E_0)$ was determined, where $K = I(p=0)/I(p=1\ atm)$ - (Fig. 2) - ; for $K_{Nb^{95}} = 8.75$ the β-radiation energy of Nb^{95}, E_0, was (0.166 ± 0.004) Mev.

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Investigation of the Beta Radiation of Nb^{95} and Ce^{144} by the Method of Absorption in Air

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B006/B014

The β-radiation of Ce^{144} was studied by the same method. Fig. 3 shows the absorption curve of β-radiation of Ce^{144}+ Pr^{144}. The β-radiation of Pr^{144}(E_0=3Mev) was separated from the sum of the two β-radiations by means of absorption in an aluminum foil. The curve of absorption in Al was extrapolated for zero thickness of the foil. The coefficient of Ce^{144} absorption in air, K, was equal to 3.35. This is in contrast with the β-component found by other research workers (~0.3 Mev; 0.3 Mev corresponds to K = 2.30). The energy $E_0 = (0.168 \begin{smallmatrix}+0.032\\-0.020\end{smallmatrix})$ Mev was determined from the $K(E_0)$ curve and a formula derived in Ref. 5. In addition to the 0.3-Mev component, at least a softer one must exist the fraction of which is estimated to be (40±12)%. This is in agreement with the results furnished by other authors (Refs. 8-10). There are 3 figures and 10 references: 4 Soviet and 6 American.

SUBMITTED: September 29, 1959

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.B.; KAGAN, N.B.; KUSHNIR, Yu.M.

Study of ion-electron emission energy spectra using an electronic emission microscope. Radiotekh. i elektron. 11 no. 2:287-290 F '66 (MIRA 19:2)

1. Submitted June 8, 1963.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ACCESSION NR: AP4043680 S/0109/64/009/008/1458/1464

AUTHOR: Rozenfel'd, L. B.; Kushnir, Yu. M.

TITLE: Elementary theory of reflection of electrons by a solid-body surface (spatial distribution)

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1458-1464

TOPIC TAGS: electron reflection, electron theory, electron reflection by solid

ABSTRACT: Based on the recent theory of the inelastic scattering of electrons by a solid body, as developed by T. K. Everhart (J. Appl. Phys., 1960, 31, 8, 1483) and N. G. Nakhodkin, et al. (Fizika tverdogo tela, 1962, 4, 6, 1514), a new theory of the spatial distribution of reflected electrons is presented. Formulas are developed for estimating the angular distribution of all reflected electrons, or a part of them having energies within a specified range; the distribution depends on the angle of incidence of the primary electrons; the

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electrons may be reflected by the solid-body proper or by a thin film covering its surface. Estimated spatial-distribution diagrams agree qualitatively with some published experimental diagrams. Quantitative discrepancies are explained. "In conclusion, the authors wish to thank V. P. Rachkov, N. B. Kagan, G. D. Pravdolyubova, and T. I. Rukavishnikova for their help with the calculations and drawing diagrams." Orig. art. has: 4 figures and 24 formulas.

ASSOCIATION: none

SUBMITTED: 08Jun63 ENCL: 00

SUB CODE: NP NO REF SOV: 003 OTHER: 003

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

KUSHNIR, Yu.M.; ROZENFEL'D, A.M.; ZAYTSEV, P.V.; KOP'YEVA, N.A.; ROZENFEL'D, L.B.

Attachment for the EEM-50 emission microscope for studying secondary emitters. Zav.lab. 30 no.12:1512-1513 '64.

(MIRA 18:1)

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ACCESSION NR: AP3007823 S/0048/63/027/009/1184/1187 57 55

AUTHOR: Rozenfel'd, L.B.; Kushnir, Yu.M.; Zaytsev, P.V.; Titov, L.A.; Bezlepkin, S.V.; Polyak, E.V.

TITLE: Reflecting electron microscope adapted for examination of strained specimens /Report, Fourth All-Union Conference on Electron Microscopy held in Sumy* 12-14 March 1963/

SOURCE: AN SSSR, Izv.Ser.fizicheskaya, v.27, no.9, 1963, 1184-1187

TOPIC TAGS: electron microscopy, strain, strength of material

ABSTRACT: The paper gives the results of testing a reflecting electron microscope adapted for observation of strained specimens. A reflecting electron microscope described earlier (Radiotekhnika i elektronika, No.8, 1359, 1961 and Zavodskaya laboratoriya, 27, 1528, 1961) with a maximum tilt angle of 22° was modified for this purpose by provision of a special object holder and incorporation of a two-slit projector lens to provide better resolution over the entire field. The optimum shape for the specimens was found on the basis of extensive experimentation; this is shown in Figure 1 of the Enclosure. The specimen holder and straining de-

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ACCESSION NR: AP3007823

2

vice is shown in Figure 2. The strain is applied by means of a synchronous electric motor rotating the screw shaft. The deformation provess was recorded by internal photography and by photography (still and motion picture) of a glass screen mounted in the bottom of the internal camera and viewed by means of a mirror. A series of four micrographs of the surface of a specimen of heat-resisting alloy, lightly etched before straining, is reproduced. The electron micrographs reveal some details not disclosed by an optical microscope. "In conclusion, the authors express their gratitude to G.V.Der-Shvarts and V.P.Rachkov for calculation of the two-slit achromatic projector lens." Orig.art.has: 4 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 07Oct63 ENCL: 01

SUB CODE: ML, SD NO REF SOV: 002 OTHER: 000

Card2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

DER-SHVARTS, G.V.; KUSHNIR, Yu.M.; ROZENFEL'D, L.B.; ZAYTSEV, P.V.; BEZLEPKIN, S.V.; TRUTNEVA, I.S.; BELEN'KIY, S.A.; TITOV, L.A.

Problems on reflective electron microscopy. Radiotekh. i elektron 6 no.8:1358-1364 Ag '61. (MIRA 14:7)
(Electron microscopy)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.B.; MAKAROV, A.I.

Ionic-optical method for producing membranes with tiny apertures.
Izv.AN SSSR.Ser.fiz. 25 no.6:754-756 Je '61. (MIRA 14:6)
(Ion beams) (Nuclear instruments)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

KUSHNIR, Yu.M.; FETISOV, D.V.; ROZENFEL'D, L.B.; ROZENFEL'D, A.M.

Russian electron microscopes for a direct examination of solid objects; survey. Zav. lab. 27 no. 12:1528-1535 '61. (MIRA 15:1)
(Electron microscope)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.B.; KUSHNIR, Yu.M.

Elementary theory of the reflection of electrons from the surface of a solid (spatial distribution). Radiotekh. i elektron. 9 no.8:1458-1464 Ag '64. (MIRA 17:10)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

PODOL'SKIY, M.V.; ROZENFEL'D, L.B.

Apparatus for counting of colonies. Lab. delo 7 no.3:51-52 Mr '61. (MIRA14:3)

1. Moskovskiy institut epidemiologii, mikrobiologii i gigiyeny i Gosudarstvennyy kontrol'nyy institut imeni L.A.Tarasevicha.
(BACTERIOLOGY—EQUIPMENT AND SUPPLIES).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

DER-SHVARTS, G.V.; KUSHNIR, Yu.M.; ROZENFEL'D, L.B.; ZAYTSEV, P.V.; BEZLEPKIN, S.V.

Modernizing the UEM-100 microscope. Izv.AN SSSR.Ser.fiz. 25 no.6:721-724 Je '61. (MIRA 14:6)
(Electron microscope)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

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B104/B102

AUTHORS: Kushnir, Yu. M., Fetisov, D. V., Rozenfel'd, L. B., and Rozenfel'd, A. M.

TITLE: Domestic electron microscopes for direct examination of compact objects

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 12, 1961, 1528 - 1535

TEXT: The first part of this review paper deals with field-emission microscopes. A microscope of A. M. Rozenfel'd and P. V. Zaytsev (Izvestiya AN SSSR, ser. fizich. (in print)) and designed for testing thermionic and secondary-electron emitters is described. It differs from the ЭЭМ-75 (EEM-75) microscope in its vacuum system (10^{-6} mm Hg) and magnetic objective lens (Fig. 1). 40 kv can be applied between the cathode and anode (distance 2.5 mm) of the objective lens. The resolution can thus be increased to 350 - 400 Å. The objective lens permits the use of both electron and ion sources (Fig. 3). Air, hydrogen, helium, argon, and other ions can be used for exciting secondary electron emission.

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Domestic electron microscopes for ...

In this case, the resolution is approximately 2000 Å. For the ЭЭМ-50 (EEM-50) microscope, an electrostatic immersion objective is being developed, which is designed to stretch and heat the specimen during examination. It can also be used for taking motion pictures of rapid processes. A field-emission microscope with electrostatic optics, developed by B. I. Popov and A. V. Druzhinin (2-e Soveshchaniye po elektronnoy mikroskopii, Nauchno-tekhnicheskoye obshchestvo im. A. S. Popov (annotatsii dokladov), M. (1958); Radiotekhnika i elektronika, no. 8 (1958)), is mentioned. The second part of this paper deals with reflecting electron microscopes which are known to operate like optical reflecting microscopes and have no high resolution owing to the large scattering of electron energies after reflection. At present, neither Russia nor other countries have such industrial electron microscopes. Some Japanese, British, and Russian transmission electron microscopes have attachments for observations in reflected light (УЭМ-100 (UEM-100); УЭМБ-100 (UEMB-100); УЭМВ-100 (UEMV-100)). The third part deals with scanning microscopes whose resolution reaches 500 - 200 Å when operating with secondary electrons. When operating with X-rays, the resolvable distance is

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B104/B102

Domestic electron microscopes for ...

approximately 1 . A resolution of approximately 800 Å was obtained for some objects examined under Soviet scanning microscopes with X-ray analyzers. These microscopes play an important role in the investigation of p-n junctions. The direct X-ray image was studied in previous experiments. In this case, the electrode probe scans a certain part of the specimen surface (0.3·0.3 mm). 50 pictures per sec can be developed with 35 2 (35LKB2B) kinescope. Microchemical analyses with scanning microscopes are also described. The fourth part of the paper deals with reflection electron microscopes, in which accelerated electrons are slowed down and reflected in the microfield of the specimen. The image is determined by this microfield. The theoretical resolution of these microscopes is approximately 1000 Å. Domestic microscopes differ from foreign types in that the images are produced in the vacuum part, whereby the quality of microphotographs is essentially improved. Magnification is about 2000. There are 10 figures and 25 references: 16 Soviet and 9 non-Soviet. The three most recent references to English-language publications read as follows: D. A. Melford a. P. Duncumb. Metallurgia, 59, 205 (1960); P. Duncumb. Brit. J. Appl. Phys., 10, 420 (1959); 11, 169

Card 3/5

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

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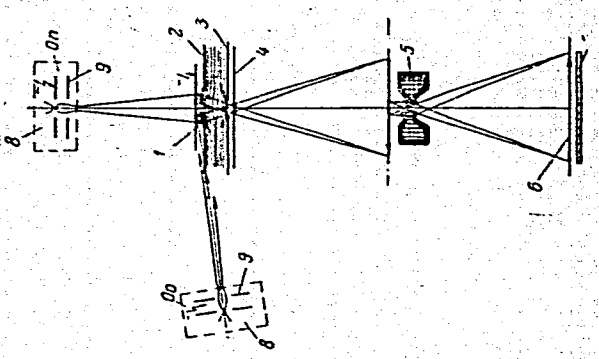
Domestic electron microscopes for ...

(1960).

Fig. 1. Emission microscope for examination of thermionic and secondary-electron emitters.

Legend: (1) Cathode of immersion objective; (2) focusing electrode; (3) anode; (4) diaphragm, (5) projection lens; (6) screen of finite representation; (7) photoplate; (8) and (9) cathode and anode of source of primary electrons.



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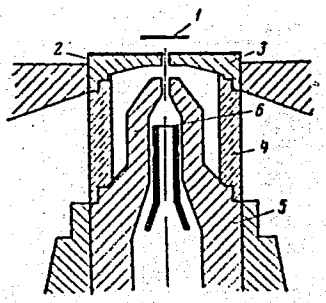
Domestic electron microscopes for ...

Fig. 2. Magnetic objective for emission microscope.
Legend: (1) cathode; (2) anode; (3) upper pole shoe; (4) ring insertion of non-magnetic material; (5) lower pole shoe; (6) diaphragm.

Fig. 3. Objective with ion source.
Legend: (1) and (2) anode and cathode of ion source; (3) and (4) cathode and anode of objective; (5) pole shoes of objective.

Fig. 2



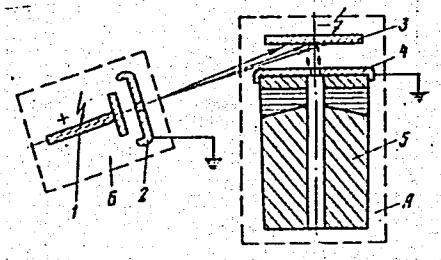


Fig. 3

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GODNYA, F. I.; ROZENFEL'D, L. G.

Malignant degeneration of esophageal diverticula. Vrach. delo no.6:23-26 Je '62. (MIRA 15:7)

1. Rentgenologicheskoye otdeleniye bol'nitsy Shevchenkovskogo rayona g. Kiyeva.

(ESOPHAGUS—CANCER)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.G.

Case of peptic ulcer in diaphragmal hernia. Vestn. rent. i rad. 38 no.3:79 My-Je '63. (MIRA 17:7)

1. Iz rentgenovskogo otdeleniya (zav. L.G. Rozenfel'd) bol'nitsy Shevchenkovskogo rayona (glavnyy vrach N.I. Begunova) Kiyeva.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.G.

Method for X-ray study of cicatricial stenosis of the esophagus. Zhur.ush., nos.i gorl.bol. 22 no.2:42-44 Mr-Ap '62. (MIRA 15:11)

1. Iz rentgenovskogo (zav. - L.G.Rozenfel'd) i khirurgicheskogo (zav. - O.M.Avilova) otdeleniy gorodskoy bol'nitsy Shevchenkovskogo rayona Kiyeva.

(ESOPHAGUS--RADIOGRAPHY)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

BALABAN, Ya.M.; ROZENFEL'D, L.G.

Use of the method of acupuncture on the auricula ("Er-Chzhen'-Liao" [Erh-Chen-Liao]) for the differential diagnosis and therapy of disorders of the motor evacuatory function of the stomach. Vrach.delo no.10:96-98 O '62. (MIRA 15:10)

1. Kabinet chzhen'tszyu terapii (zav. - starshiy nauchnyy sotrudnik Ya.M.Balaban) Instituta infektsionnykh bolezney Ministerstva zdravookhraneniya UkrSSR i klinicheskaya bol'nitsa Shevchenkovskogo rayona Kiyeva.
(ACUPUNCTURE) (STOMACH--MOTILITY)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.G.

Case of total dilatation of the veins of the esophagus. Vrach.delo no.9:139-140 S '62. (MIRA 15:8)

1. Rengenologicheskoye otdeleniye (zav. - L.G.Rozenfel'd) bol'nitsy Shevchenkovskogo rayona Kiyeva.
(VARIX) (ESOPHAGUS--DISEASES)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

Dissertation: "Phytoncides in Medicinal Plants." Cand Med Sci, Samarkand Medical Inst, Samarkand, 1954. Referativnyy Zhurnal--Khimiya, Moscow, No 14, Jul 54.

SO: SUM No. 356, 25 Jan 1955

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.I., KHAZANOVICH, R.L.

Possibility of preserving volatile fractions of phytoncides in vegetable material. Apt.delo 7 no.4:22-27 Jl-Ag '58 (MIRA 11:8)

1. Iz Tashkentskogo farmatsevticheskogo instituta.
(PHYTONCIDES)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

VANINA, L.V., doktor med.nauk; SEROV, V.N., kand.med.nauk; ZAKHARCHENKO, N.N.; ROZENFEL'D, L.I.; SOSHKINA, N.I.

Outcome of pregnancy and labor in heart defects; based on data of the maternity home at the 67th Moscow Clinical Hospital. Sov.med. 28 no.11:55-60 N '65.

(MIRA 18:12)

1. Kafedra akusherstva i ginekologii (zav. - prof. K.N. Zhmakin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova i 67-ya Gorodskaya klinicheskaya bol'nitsa (glavnyy vrach P.S.Petrushko), Moskva.

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CA

22

Calcium acetate. L. V. Filipovich and L. M. Rozenfel'd. Russ. 39,781, Nov. 30, 1934. Tar water from the dry distn. of wood is neutralized and extd. with birch tar oil. The ext. is sepd. and the aq. layer filtered and evapd.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

22

Preparation of gray powder (calcium acetate) in primitive plants. L. M. Rozenfel'd. *Lesokhim. Prom.* 4, No. 2, 13-17(1935).—Tar water was treated with freshly pptd. $Ca(OH)_2$ to a slightly acidic reaction, the liquid decanted, fractions b. below 100° were distd. off and the remaining liquid was treated with tar (10:4) under agitation. The mixt. was filtered and concd. The same tar may be used over again. The $Ca(CH_3COO)_2$ obtained is of a high concn., light color and low in tar. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L. M., KON', Ya. S. and KACHALOVA, Ye. K.

"Air Foam as a Larvacide", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 2, pp 184-87, 1948.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L. M. Dr. Tech. Sci.

"Effect of the Processes of Crystallization Water in the Soil on the Hibernation of Plants," Agrobiol., No.5, 1949

Physico-Agronomical Inst., Leningrad

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

Meteorological Abst.
Vol. 4 No. 9
September 1953
Part 1
Radiation and
Temperature

4.9-125 551.525.4:551.584.43

Rozenfel'd, L. M. and Riabova, E. P., **Izmerenie temperatury uzla kushchenila ozimykh kul'tur v period ikh perezimovki.** [Measurement of the stooling node temperatures of winter crops during the wintering period.] *Vsesoiuznaia Akademiia Sel'skokhozialstvennykh Nauk imeni V. I. Lenina, Doklady*, No. 1:26-29, 1952. 3 figs., table, 5 refs. DLC—Investigations were made during the winter of 1950/1951 at Ershovo experimental point of Saratov Agricultural Institute. Thermocouples of great sensitivity were brought into close connection with the stooling nodes of plants for measurement of their temperatures. Insignificant differences have been found between the temperatures of stooling nodes and the soil near the nodes. This permitted the determination of the temperature of stooling nodes by measurements of soil temperature near by. The peculiarities of the microrelief caused much greater differences, and that is why the representative characteristics of thermal conditions can be obtained with sufficient accuracy by measurements of soil temperature in many points of the field. *Subject Headings:* 1. Plant climatology 2. Microclimatology 3. Agricultural meteorology.—*V.T.Z.*

EH
5/21/54

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.M.; GUDKOVA, M.K.

Field device for determining thermal characteristics fo frozen soil and the snow cover. Sbor.trud.po agron. fiz. no.5:126-133 '52. (MIRA 11:7)

(Soil temperature--Measurement) (Frozen ground)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

BOLONKIN, N.A.; ROZENFEL'D, L.M.

Photomicrographic method for studying ice structure in soil.
Sbor.trud.po agron. fiz. no.5:134-136 '52. (MIRA 11:7)
(Photomicrography) (Frozen ground)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ZAKHAROV, N.G.; ROZENFEL'D, L.M.

The structure of ice in soil when winter crops are sown on stubble or on fallow. Sbor.trud.po agron.fiz. no.6:243-246 '53. (MIRA 11:7)

(Frozen ground)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ACC NR: AP7003344 /AN/ SOURCE CODE: UR/0281/66/000/006/0084/0096

AUTHOR: Rozenfel'd, L. M. (Novosibirsk)

ORG: none

TITLE: Low temperature problems in power engineering [Report presented at a visiting session of the Department of Physicotechnical Problems in Power Engineering of the AN SSSR at the Novosibirsk Scientific Center, March 21 to 23, 1966]

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 6, 1966, 84-96

TOPIC TAGS: cryogenics, cryogenic refrigeration, power engineering, cryogenic pump, power engineering, geothermal power plant, waste heat, electric power plant

ABSTRACT: A study was made of the use of low temperature heat for refrigeration, heating, and for the generation of electric power. It is shown that geothermal and other sources of waste heat may be used to obtain low temperatures and to increase the temperature level of heat carriers by means of absorption machines, and that both heating and cooling effects may be obtained from these sources with the use of heat pumps. The thermodynamic cycles of substances with low boiling points are

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ACC NR: AP7003344

analyzed in relation to geothermal electric power plants and low temperature facilities of large thermal electric power stations; electric generator cooling is also discussed. Orig. art. has: 4 tables and 9 figures. [Translation of author's abstract] [SP]

SUB CODE: 20, 21/SUBM DATE: 19May66/ORIG REF: 025/OTH REF: 002/

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

KUTATELADZE, S.S., doktor tekhn.nauk; ROZENFEL'D, L.M., doktor tekhn.nauk

Problems of geothermal power. Vest. AN SSSR 35 no.10:25-31 O '65. (MIRA 18:10)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

KOSTOCHKINA, T.V., arkhitektor; ROZENFEL'D, L.M., kand. khimicheskikh nauk

Atmospheric resistance of cement coverings on cellular concrete products. Trudy NIIZHB no.32:278-294 '63. (MIRA 17:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.M., kand. khimicheskikh nauk; VASIL'YEVA, T.D., inzh.

Structural and mechanical properties of cement-lime-ash mixtures used in the production of nonautoclaved gas concrete with fly ash. Trudy NIIZHB no.32:256-262 '63. (MIRA 17:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.M., prof.; ZVORONO, Yu.S., inzh.; ONOSOVSKIY, V.V., inzh.

Dynamic heating and cooling by using the heat of discarded water.
Gidr.stroi. 33 no.10:26-31 O '62. (MIRA 15:12)
(Waste heat) (Heating from central stations)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.M., prof.; ONOSOVSKIY, C.C., inzh.

Use of heat pumps in air conditioning systems. Vod. i san. tekh. no.12:14-18 D '61. (MIRA 15:6)
(Air conditioning) (Heat pumps)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445620006-3

ROZENFEL'D, L.M., prof.; ZVONONO, Yu.S., inzh.; ONOSOVSKIY, V.V., inzh.

Application of a freon refrigerating machine for cooling and dynamic heating. Teploenergetika 8 no.6:12-16 Je '61. (MIRA 14:10)

(Refrigeration and refrigerating) (Thermodynamics)

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DOBROVOL'SKIY, Aleksandr Petrovich; ROZENFEL'D, L.M., doktor tekhn. nauk, prof., retsenzent; SMIRNOV, A.I., inzh., retsenzent; SELIVANOV, K.I., nauchnyy red.; OZEROVA, Z.V., red.; TSAL, R.K., tekhn. red.

[Refrigerating installations on ships] Sudovye kholodil'nye ustanovki. Leningrad, Sudpromgiz, 1962. 390 p. (MIRA 15:5)
(Refrigeration on ships)

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ROZENFEL'D, Iosif Mikhaylovich, prof.; IVANOV, N.I., red.; SHEVCHENKO, F.Ya., tekhn. red.

[Danger of diseases of the ear and their prevention] Opasnost' ushnykh zabolevanii i ikh preduprezhdenie. Leningrad, Medgiz, 1960. 21 p. (MIRA 14:12)

(EAR—DISEASES)

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"Thermodynamic Analysis of Irreversible Losses of the Thermification Reverse-Cycle Process Effected by Vapors of Boiling Liquids," Zhur. tekh. fiz., Vol. 23, p. 2214, 1953

Lab. Colloid Chemistry, Moscow State U.

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Sib. 7 Colloid Chem.

Structure-mechanical properties of foams. L. M. Rozenfel'd and E. M. Savitskaya (Univ. Moscow). *Kolloid. Zhur.* 13, 454-60(1951).—Foams were sheared between an outer cylinder, which slowly rotated, and an inner cylinder suspended on a torsion wire. When the outer cylinder turned by $\varphi_1°$, the deviation of the inner cylinder was φ_1, and the torque P (dynes/sq. cm.) on the inner cylinder was detd. as a function of $\epsilon = \varphi_1 - \varphi_1$ (expressed in radians). P varied with ϵ in 3 ways: (1) P linearly increased with ϵ to a max. (P_m) (usually at ϵ_m = 0.02 to 0.2) and then decreased to a value that was about $0.5P_m$ and independent of ϵ (e.g., between ϵ = 0.8 and 1.6). If the outer cylinder was turned by $\epsilon < \epsilon_m$ and then stopped, P remained const. until the foam collapsed, showing that the foam was truely elastic along the linear stretch. This type was observed for Na 6-butyl-1-naphthalenesulfonate (I), Na dioctyl sulfosuccinate, Na pyridineundecanesulfonate, and "frother P-O-I". Between 0.2% and 2% I, P_m varied with concn. parallel to the ratio r of foam vol. to liquid vol. in foam; both had a max. at 0.5% (P_m = 75; r = 90) and were independent of concn. between 1% and 2%. Thus, foam is strongest when its lamellas are thinnest. (2) P gradually increased with ϵ to a const. value. This was 70 and 110 for 2% and 0.125% saponin (II), resp., and independent of ϵ between about 0.4 and 1.4. In this range r also increased when concn. decreased. More dil. II soln. belonged to type (3); P had a max. (e.g. 170 at ϵ = 0.4 for 0.05% II) but did not reach a plateau at greater ϵ because the foam was ruptured near the inner cylinder. Foam of Na sulfonaphthenate was strengthened by gelatin, and the shape of the P-ϵ curve (type 1) was altered. J. J. Bikerman

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1. ROZENFEL'D, L. M.

2. USSR (600)

4. Silicates

7. Carbonated foam silicate, Biul. stroi. tekh., 9, No. 22, 1952.

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

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Foaming agent GK for the production of cellular concrete. L. M. Rozenfel'd. *Issledovaniya po Yacheistym Betonam* (Moscow: Gosudarst. Izdatel. Lit. po Stroitel. i Arkhitektura) 1953, 57-70; *Referat. Zhur., Khim.* 1955, No. 7069.—The foaming agent GK is prepd. from the waste of the meat and dairy industry. Concretes prepd. with it have the same strength and do not contract when poured to depths up to 30 cm. The prepn., the phys.-chem. properties, and its structural and mech. properties are given. M. Hosch

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ROZENFEL'D, L. M.,

243. Primeneniye Khimicheskikh Dobavok Pri. Zimnikh Kamennykh, Betonnykh I Shtukaturnykh Raborakh, Pod Red. P. N. Grigor'yeva. M., Gos. Izd. Lit. Po Stroitel'stvuy I Arkhitekture, 1954. 80 S Sill. 20 S M. (M-vo) Stroitel'stva Predoriyatiy Metallurgich. Khim. Prom-sti. Sssr. Tekhn. Upr. Tsentr. Nauch.-Issled. In-t Prom. Sogoruzheniy TSNIPS. Nauch. Soobshcheniye. Vyp. 16). 4.000 EKZ. 2r 95K-(54-14490Zh)
691.5 t 693":24"

SO: Knizhnaya, Letopis, Vol. 1, 1955

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KOZENFEL'D, L. M.

Water-repellant cellular concrete. L. M. Rozenfel'd. *Issledovaniya po Yacheistym Betonam* (Moscow: Gosudarst. Izdatel. Lit. po Stroitel. i Arkhitekture) 1955, 71-8; *Referat. Zhur., Khim.* 1955, No. 7960.—Cellular concrete made with water-repellant cement has an adsorption capacity 25% less than the adsorption capacity of concrete made with ordinary cement. Addn. to the cement of 0.1% of a water-repellant, surface-active substance, e.g., oleic acid, does not lower the strength of the concrete but reduces its water adsorption capacity. M. Hosch

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