ROZENFEL'D, L.M., kandidat khimicheskikh nauk.

The GK foaming agent for cellular concretes. Stroi.prom. 34 no.10:40-41 O '56. (MLRA 9:12)
(Lightweight concrete)

ROZENFEL'D, L.M.; BARANOV, A.T.

Alumosulfonaphthene compound as a frothing agent for cellular concretes. Rats. i izobr. predl. v stroi. no.137:24 '56.
(Concrete) (Naphthenes) (MLRA 9:9)

ROZENFEL'D, L.M.

Aluminum sulfate as an accelerator for setting and hardening non-autoclave foam concrete. Rats. i izobr. predl. v stroi. no.137:28-30 '56.(MLRA 9:9)
(Concrete) (Aluminum sulfate)

ROZENFEL'D, L.M., kand. khim. nauk.

Manufacture and properties of non-autoclaved ash foam concrete.
Bet. i zhel.-bet. no.9:359-362 S '57. (MLRA 10:11)
(Lightweight concrete)

ROZENFEL'D, L.M., kand.khim.nauk; TESLER, P.A., kand.tekhn.nauk, nauchnyy red.; PETROVA, V.V., red.izd-va; GILENSON, P.G., tekhn.red.; STEPANOVA, E.S., tekhn.red.

[Provisional instructions for making air-entrained and plain cinder-concrete products without using autoclaves] Vremennye tekhnicheskie ukazaniia po izgotovleniiu izdelii iz bezavtoklavnogo zolopenobetona i zolobetona. Moskva, 1958. 37 p. (MIRA 12:3)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Laboratoriya yacheistykh i legkikh betonov i uskorennykh metodov tverdeniya betona Nauchno-issledovatel'skogo instituta betona i zhelezobetona (for Rozenfel'd). (Cinder blocks)

SOV/97-58-10-9/17

AUTHORS: Alekseyev, S.N., and Rozenfel'd, L.M.
(Candidates of Technical Sciences)

TITLE: Corrosion of Reinforcement in Articles made from Autoclave-Cured Cellular Clinker Concrete (O korrozii armatury v izdeliyakh iz avtoklavnogo yacheistogo zolobetona)

PERIODICAL: Beton i zhelezobeton, 1958, Nr 10, p 388 (USSR)

ABSTRACT: The Kurakhovka factory for building materials produces from cellular concrete large wall panels and slabs for industrial buildings. Cellular concrete has the following aggregate per 1 m3: 260-280 kg portland cement or slag portland cement mark 400, and 520-560 kg ground slag. For aeration of the concrete hydrolyzed blood is used (GK). Tests of the technical advisory bureau TsNIPS showed that it is possible to use in cellular concrete, instead of sand, clinker from Kurakhovka Hydro-electric Power Station. The volumetric weight of aerated clinker concrete, in the case of wall panels and slabs type KAP, is between 800-900 kg/m3 and the strength in compression 60-70 kg/cm2. Large panels up to 6.5 x 1.5 m, 20-30 cm thick, were used in Lugansk Hydro-electric Power Station. Intensive corrosion of

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Corrosion of Reinforcement in Articles Made from Autoclave-Cured Cellular Clinker Concrete

the reinforcement of these wall panels was observed, and specialists were called in from the Institute for Concrete and Reinforced Concrete (Institut betona i zhelezobetona) ASiA SSSR. It was found in the majority of cases that when panels had been deposited in the open the reinforcement corroded, especially in those cases when panels had been stored for a long time in the open: these were badly corroded and showed hair cracks running along the ribs on the inside. The same corrosion appeared in KAP slabs. Tests showed that the water content of those aerated clinker concrete slabs, which cracked due to exposure to weather, reached 40-45%, whereas when these left curing the water content was not higher than 20-25%. The high water content of aerated clinker concrete accelerates corrosion of reinforcement. Further, the tests showed that after accelerated curing, i.e. drying, provided the panels are protected against rain, corrosion ceased and did not recur. To protect the reinforcement used in aerated clinker concrete

 against corrosion various protective coatings are applied

Corrosion of Reinforcement in Articles made from Autoclave-Cured Cellular Clinker Concrete

and the articles are kept under cover. The Central Laboratory for Corrosion of the Institute for Concrete and Reinforced Concrete recommended the following effective procedures to protect the reinforcement: (1) coating the reinforcement with a cement-casein suspension with the addition of a passivating agent, as, for example, sodium nitrate. (2) storing finished articles under cover: if there is no covered store available it is advisable to protect the surfaces from water by using hydrophobic or other film forming materials affording weather protection.
There are no figures, no references.

ROZENFEL'D, L.M. kand. khim. nauk

Porous materials made with cinders without using autoclaves.
Stroi. mat. 5 no.4:8-10 Ap '59. (MIRA 12:6)
(Lightweight concrete)

ROZENFEL'D, L.M., kand.khim.nauk

Large construction elements made of fly-ash and foamed fly-ash concrete hardened without using autoclaves. Trudy NIIZHB no.8:97-105 '59. (MIRA 13:4)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Lightweight concrete)

PLUNGYANSKAYA, M.N., kand.tekhn.nauk, ROZENFEL'D, L.M., kand.khim.nauk

Thorough waterproofing of products made of autoclave-hardened foamed cinder concrete. Stroi. mat. 6 no.7:37-38 Jl '60. (MIRA 13:7)

(Waterproofing) (Lightweight concrete)

ROZENFEL'D, L.M., kand.khim.nauk

Using uncalcinated aluminum powder in producing aerated concrete.
Bet.i zhel.-bet. no.12:561-563 D '60. (MIRA 13:11)
(Lightweight concrete)

KAMERILOKH, N.A., inzh.; ROZENFEL'D, L.M., kand. khim. nauk; BEREZIN, N.N., inzh.

High-strength cementless gas concrete made with slag and fly ash. Stroi. mat. 10 no.7:34-36 Jl '64 (MIRA 18:1)

ROZENFEL'D, L.M., kand.khim.nauk; BEN'YAMINOVICH, I.M., laureat Leninskoy premii; BEREZIN, N.N.; MEYMAN, A.G.; VASIL'YEVA, T.D.

Possibilities of using acid blast-furnace and open-hearth waste slags for the production of cellular concretes. Stroi. mat. 9 no.2:26-28 F '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Rozenfel'd, Vasil'yeva). 2. Glavnyy inzh. Gosudarstvennogo tresta stroitel'nykh predpriyatiy g. Nizhniy Tagil (for Ben'yaminovich). 3. Nachal'nik tsentral'noy laboratorii Gosudarstvennogo tresta stroitel'nykh predpriyatiy g. Nizhniy Tagil (for Berezin).
(Slag) (Lightweight concrete)

ROZENFELD, L. M.; KARNAUKH, M. S.

"Analysis of actual processes in a lithium bromide absorption machine."

Report presented at the 11th International Congress Of Refrigeration, (IIR), 27 Aug-4 Sep 63, Munich , West Germany.

KUDRYASHEV, I.I.; BARANOV, A.T; ROZENFEL'D, L.M.; BORDYUG, D.Ya.; LEVIN, M.V.; KALNINA, N.A.; KAN, F.A.; VAS'YANOV, D.P., red.; KUZNETSOV, A.I., tekhn. red.

[Technical specifications for manufacturing articles from cellular concrete, foamed fly ash concrete, breeze foamed fly ash silicate, and foamed clinker concrete] Tekhnicheskie usloviia na izgotovlenie izdelii iz avtoklavnykh iacheistykh betonov - penozolobetona, penozolosilikata i penoshlakobetona; proekt. Moskva, TSentr. biuro tekhn. informatsii, 1959. 62 p. (MIRA 15:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut novykh stroitel'nykh materialov, otdelki i oborudovaniya zdaniy. 2. Nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Kudryashev). 3. Nauchno-issledovatel'skiy institut betona i zhelezobetona (for Baranov, Rozenfel'd). 4. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu Akademii stroitel'stva i arkhitektury SSSR (for Bordyug, D.Ya.). 5. Nauchno-issledovatel'skiy institut promyshlennykh zdaniy i sooruzheniy (for Levin). 6. Zapadno-Sibirskiy filial Akademii stroitel'stva i arkhitektury SSSR (for Kalnina). 7. Ural'skiy filial Akademii stroitel'stva i arkhitektury SSSR (for Kan).

(Lightweight concrete)

KUZ'MENKO, D.Ye.; ROZENFEL'D, L.M., starshiy nauchnyy sotrudnik, kand.khimicheskikh nauk; LEVIN, N.I., starshiy nauchnyy sotrudnik, kand.tekhn. nauk

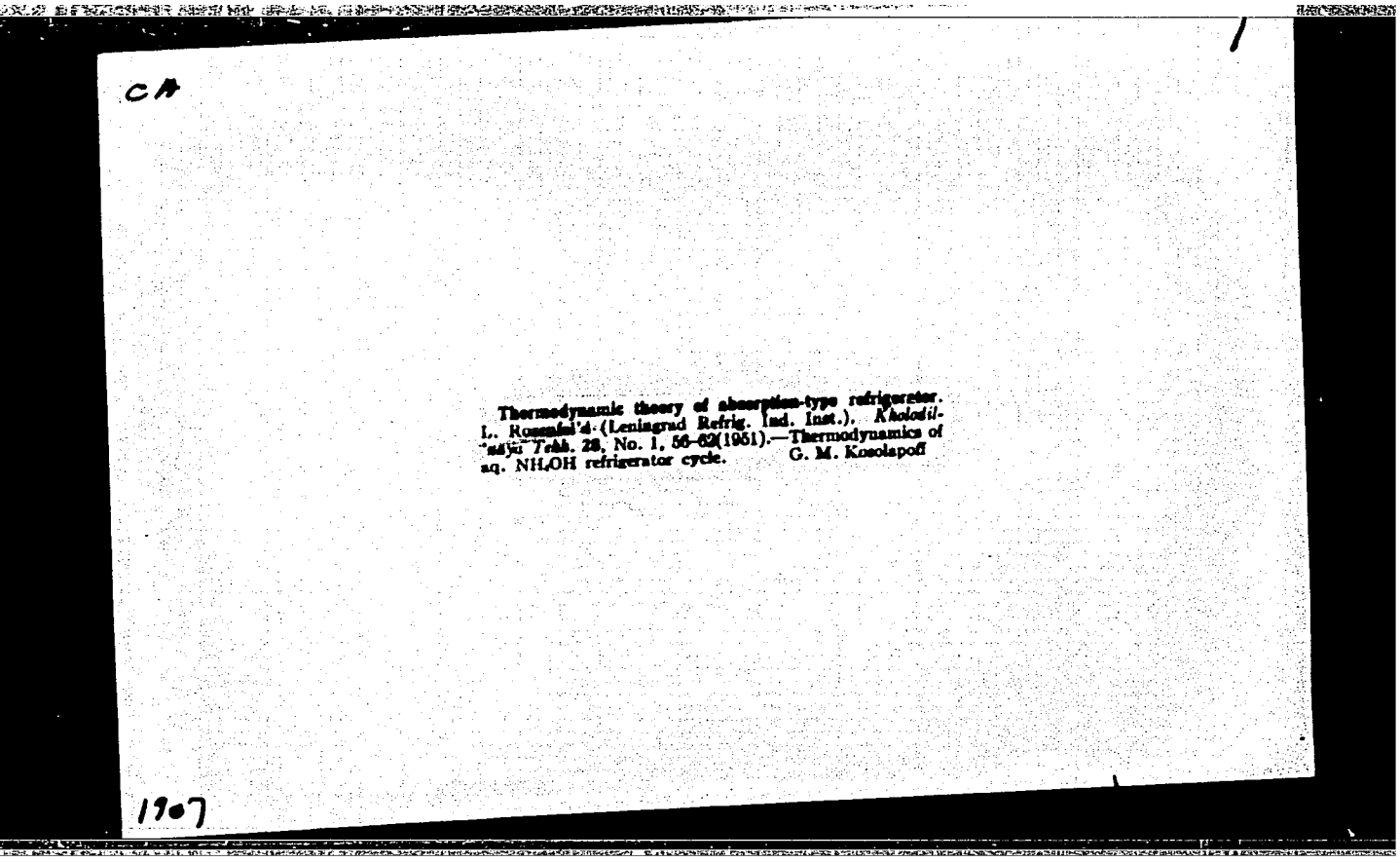
Air-entrained slag and ash concrete parts for precast construction. Stroi.mat. 7 no.6:2-7 Je '61. (MIRA 14:7)

1. Upravlyayushchiy trestom Tagilstroy (for Kuz'menko).
2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Rozenfel'd).
3. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Akademii stroitel'stva i arkhitektury SSSR (for Levin).
(Tagil River Basin--Precast concrete)
(Air-entrained concrete)

ROZENFEL'D, L.M., kand.khim.nauk; BEN'YAMINOVICH, I.M., inzh., BEREZIN, N.N., inzh.

Large autoclave-hardened aerated breeze and fly-ash concrete slabs made without using cement. Bet. i zhel.-bet. no.2:68-72 F '61. (MIRA 14:2)

(Concrete slabs) (Lightweight concrete)



CA

1

Thermodynamic theory of absorption-type refrigerator. I.. Rossalai'd. (Leningrad Refrig. Ind. Inst.). *Kholodil-'naiya Tekh.* 28, No. 1, 56-62(1951).—Thermodynamics of aq. NH_4OH refrigerator cycle. G. M. Kosolapoff

1907

ROZENFEL'D, L.M., kand.tekhn.nauk; TESLER, P.A., kand.tekhn.nauk;
TSVETAYEVA, R.A., inzh.

Using ashes from thermoelectric power plants in housing construction. Trudy NIIZHB no.8:158-171 '59.
(MIRA 13:4)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Lightweight concrete) (Berezniki--Precast concrete construction)

S/097/60/000/012/004/007
A053/A029

AUTHOR: Rozenfel'd, L.M., Candidate of Chemical Sciences

TITLE: Utilization of Uncalcinated Aluminum Powder in the Production of Gas Concrete

PERIODICAL: Beton i zhelezobeton, 1960, No. 12, pp. 561-563

TEXT: The article describes a method developed by NIIZhB, whereby it is possible to obtain high-grade gas concrete by using the same proportion of uncalcinated aluminum powder in the place of calcinated powder. Each aluminum grain is rendered water-repellent by a thin layer of paraffin. The marginal angle θ formed by water on paraffin at the border line of air is $103^{+3}_{-3}{}^{\circ}$. If pure water is replaced by a solution of surface-active substances of weakest concentration, the marginal angle formed by air bubbles is radically changed and diminished to the extent as the concentration of surface-active substances increases. Starting with a concentration of 0.01-0.015% of saponin, paraffin is thorcughly wetted by aquaeous solutions, thus changing from a water-repellent to a water-absorbing surface. Paraffined aluminum no freely

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Utilization of Uncalcinated Aluminum Powder in the Production of Gas Concrete

mixes with water; after a short time particles of aluminum powder begin to coagulate, which can only be prevented by a stabilizer, like saponin or any other soap-like surface-active substance used for rendering paraffin water-absorbant. Experiments have shown that by increasing the concentration the stability of the water aluminum suspension is prolonged by a few hours. A stable suspension is obtained by taking 0.25 g of surface-active substance per 1 g of aluminum powder. For 1 m^3 of gas concrete requiring 0.3-0.7 kg of aluminum powder, 75-175 g of surface-active substance is needed or approximately 0.05% of the water solution. The article describes the test which was made with a foam concrete mixture comprising the following ingredients (weight parts): Portland cement (0.75), calcium oxide (0.25), and cinders (1.2). Foam agent ГК (GK) and plasticizer ССБ (SSB) were used as surface-active substances, gypsum (3% of the weight of the binding material) and water 46-50% of the weight of the dry substances were added. From this concrete cubes were made which on being tested showed the characteristics as given in Table 1. It can be seen that the use of aluminum powder in the

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Utilization of Uncalcinated Aluminum Powder in the Production of Gas Concrete

shape of a water suspension has the same effect as calcinated aluminum powder, nor is the structure of the concrete in any form interfered with, provided the process of mixing the suspension lasts no less than 3 minutes. The article explains why the amount of oxygen liberated as a result of introduction of aluminum powder does not as a rule correspond with the theoretical quantity obtained by the formula $2Al + 3Ca(OH)_2 = Al_2O_3(CaO)_3 + 3H_2$, viz., about 1.3 l per 1 g of aluminum: part of the aluminum powder does not react and part of the oxygen escapes into the air. The basic mass of oxygen separates within 30 minutes at a temperature of 36°C, while the calcinated powder yields 25-27% more oxygen than uncalcinated. However, at a temperature of 40°C, at which gas concrete expands in the process of production, there is practically no difference between the two kinds of powder, as far as oxygen yield is concerned. The volumetric weight and the coefficient of utilization of powder depend basically on the quantity of water used, viz., upon the consistency of the solution. There is 1 photograph, 1 table and 2 graphs.

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Utilization of Uncalcinated Aluminum Powder in the Production of Gas Concrete

Table 1: Strength of gas concrete in relation to volumetric weight

Characteristic of aluminum powder	volumetric weight in kg/m^3	tensile strength at compression in kg/cm^2
calcinated	600	25
	700	40
	800	54
uncalcinated (water aluminum suspension)	600	24
	700	41
	800	52

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ROZENFELD, L. M.

USSR/Physics - Thermodynamic Cycle May 52

"Generalized Thermodynamic Cycle of Refrigerating Machine and Dynamic Heating," L. M. Rozenfeld, Leningrad Inst of Refrigeration and Dairy Ind--

"Zhur Tekh Fiz" Vol XXII, No 5, pp 794-807

Analysis of practical conditions of cycles of refrigeration and of dynamic heating proved that its comparison with Carnot's cycle is not always correct. The introduction of a generalized cycle, based on thermodynamic efficiency, indicates the way to be followed by constructors of refrigerating and heating machines. Received 14 Oct 51.

222T81

Rozentel'd, L. M.

2

✓Entropy diagrams of equilibrium phases of the water-ammonia system. L. M. Rozentel'd. *Zhur. Tekh. Fiz.* 22, 808–15(1952). ~~C.A. 46, 8191f.~~ From thermodynamic considerations temp.-entropy (I) and enthalpy-entropy (II) diagrams are constructed for liquid and vapor phases. Lines of const. compn. and const. pressure (0.5 to 20 atm.) appear in both sets of diagrams. In addn. the I diagram includes lines of const. enthalpy, and the II diagram includes lines of const. temp. The implications of the diagrams for the study of thermodynamic cycles of ammonia-water systems are discussed. C. H. Fuchsman

CH

Leningrad Inst. Refrigeration + Dairy Industry

ROZENFELD, L. M.

USSR/Engineering - Thermodynamic Cycles Jul 52

"Operating Processes of Water-Ammonia Thermodynamic Cycles of Thermal Engines and Their Analysis by Means of Entropy Diagram," L. M. Rozenfeld

"Zhur Tekh Fiz" Vol XXII, No 7, pp 1124-1138

Author constructs diagrams temp-entropy and enthalpy-entropy as basis for analysis. He expects a reduction of irreversible losses by adequate choice of concn of operating liquid and by application of muli-step processes. Received 16 Oct 51.

223T44

ROZENFELD, L. M.

~~BARENBEV, G. M.~~

USSR/Engineering - Refrigeration Jul 52

"Operating Processes of Thermodynamic Cycles of a Water-Ammonia Compressor Refrigerating Machine," L.M. Rozenfeld

"Zhur Tekh Fiz" Vol XXII, No 7, pp 1139-1145

Analysis of the thermodynamic cycle of a water-ammonia compressor refrigerator proved that the machine operates by heat exchange and therefore is efficient if provided with sources of variable temp. The thermodynamic cycle depends on choice of concn of soln. Regeneration of heat allows one to realize the heat producing cycle of the refrigerating machine within a small pressure variation. Received 16 Oct 51.

223T45

USSR/Engineering - Thermodynamics, Refrigeration — Aug 52

"Thermodynamic Theory of the Cycles of Dynamic Heating by Means of a Refrigeration Machine," L. M. Rozenfel'd

"Zhur Tekh Fiz" Vol 22, No 8, pp 1334-1345

Analysis of the thermodynamic cycle in refrigeration proved that it may be applied for heating purposes using the energy of hydroelec stations. Machines may be designed which would use the low temp of the

226T36

cold season to obtain mech work, thus supplying the cycle of dynamic heating without steam engine or compressor. Received 16 Oct 51.

226T36

ROZENFEL'D, L. M.

ROZENFELD, L. M.

USSR/Engineering - Thermodynamics, Refrigeration — Aug 52

"The Theory of Combined Cycles in the Absorption Refrigeration Machine," L. M. Rozenfeld

"Zhur Tekh Fiz" Vol 22, No 8, pp 1346-1355

Author states that thermodynamic analysis of an absorption machine reveals 2 combined cycles; namely, those of the thermal engine and refrigeration machine. The thermodynamic efficiency of the combined cycles is detd by the product of the efficiency coeff of refrigeration. Hence, the

226T37

ciency coeff of refrigeration. Hence, the author states, the same analytical methods may be applied to the absorption refrigerator as to the compression and steam engines. Received 16 Oct 50.

226T37

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F

THERMODYNAMIC CYCLES OF DYNAMIC HEATING UTILIZING TEMPERATURE DIFFERENCES AVAILABLE IN THE COLD SEASON. Rozenfel'd L.M. (Doklady Akad. Nauk SSSR (Rep. Acad. Sci. U.S.S.R.), 21 Jan. 1952, vol. 82, (3), 393-396). A cycle is proposed which makes use of the principles of the heat pump and of the ammonia absorption refrigerator. (L)

CA

Methods of construction of entropy diagrams of equilibrium phases of an aqueous ammonia solution. L. M. Rozenfel'd (Leningrad. Inst. Kholodil'nof i Molochnof Prom.). *Doklady Akad. Nauk S.S.S.R.* 82, 723–6(1952).—From the exptl. material and its evaluation (V. Fischer, *C.A.* 29, 7772^{9}) the differential isobaric potential μ_1' of the liquid phase of the NH_3 component can be written $\mu_1' = \varphi_1' + AR_1T(0.84\ s_1'^{3} - 4.80s_1'^{2} + 5.68s_1' - 0.42) + AR_1T\ln s_1' + 15.2s_1'^{2} - 11.4s_1'^{3})$, where s' is the mol. concn., φ_1' the isobaric thermodynamic potential of the component in the pure state at the pressure and the temp. of the soln., AR_1 the characteristic gas const. of the component in the pure state, and the coeff. $\varepsilon_1 = -1550$. For the vapor phase of NH_3, assumed to be ideal, $\mu_1'' = \varphi_1'' + AR_1T\ln s_1''$. With the aid of the equil. conditions $\mu_1' = \mu_1''$ and $\mu_2' = \mu_2''$, one finds $s_1' = (1 - e^{a})/(e^{b} - e^{a})$, where a and b are functions of (p,T,s'), with $a(p,T,s')$ defined by $a = (\varphi_1' - \varphi_1'')/AR_1T + |(\varepsilon_1 s_1'^{2}/T)(0.84s_1'^{3} - 4.80s_1'^{2} + 5.68\ s_1' - 0.42)| + (15.2s_1'^{2} - 11.4s_1'^{3})$. In an analogous way, the function $b(p,T,s')$ is defined from the 2nd condition. The equation for s_1' is easily solved graphically. The concn. of the gas phase is detd. by the equation $s_1'' = s_1'e_1^{a}$ obtained from the equil. conditions. With given p and T of the soln., the equil. concns. of the liquid and vapor phases are found, and then the entropies and enthalpies with the aid of the equation written at the outset, and tables for steam and for superheated NH_3 vapor. New diagrams, entropy-temp. and enthalpy-temp., were constructed by this method for the equil. phases of the aq. NH_3 soln.

N. Thon

ROZENFEL'D, L. M.

Refrigeration and Refrigerating Machinery

Methods of thermodynamic analysis of revers circulatory processes in refrigerating machines and in dynamic heating. Dokl. AN SSSR 85 no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

ROZENFELD, L. M.

DEVELOPMENT OF HEAT PIPES FOR UTILIZING HEAT FROM HYDRO-GENERATOR
Kochkin, N.N., Kuryiev, E.S. and Rozenfeld, L.M. (Elektr. Sta.
(Moscow), June 1953, Vol. 24, 38-40).

ROZENFEL'D, L., professor, doktor tekhnicheskikh nauk; KOSHKIN, N., dotsent, kandidat tekhnicheskikh nauk.

Use of an air refrigerating machine for the hardening of metals. Khol. tekh. 30 no.2:15-19 Ap-Je '53. (MLRA 6:7)

1. Leningradskiy institut kholodil'noy i molochnoy promyshlennosti. (Metals--Heat treatment)

BADYLKES, I.S. [author]; ROZENFEL'D, L., professor, doktor tekhnicheskikh nauk; TKACHEV, A., kandidat tekhnicheskikh nauk, dotsent; KURYLEV, E., kandidat tekhnicheskikh nauk, dotsent; SERDAKOV, G., inzhener.[reviewers].

"Active substances in refrigerating machines." Khol.tekh. 30 no.2:78-79 Ap-Je '53. (MLRA 6:7)
(Refrigeration and refrigerating machinery) (Badylkes, I.S.)

ROZENFEL'D, L.M.; MIKHAL'SKAYA, R.N.; IOFFE, A.F., akademik.

Analysis of the effect of the physical properties of a working body on the magnitude of irreversible losses in reverse cycles. Dokl.AN SSSR 93 no.2: 269-272 N '53. (MLRA 6:10)

1. Leningradskiy institut kholodil'noy i molochnoy promyshlennosti. 2. Akademiya nauk SSSR (for Ioffe). (Thermodynamics)

ROZENFEL'D, L.M., doktor tekhn. nauk, prof.; KURYLEV, Ye.S., kand. tekhn. nauk, dots.; KOSHKIN, N.N., kand. tekhn. nauk, dots.

Methods of sloving the principle problems in the design of heat pump systems for the heat supply of hydroelectric power stations. Trudy LTIKHP 5:4-14 '54. (MIRA 11:3)
(Hydroelectric power stations) (Heat pumps)

ROZENFEL'D, L.M., doktor tekhn. nauk, prof.; MIKHAL'SKAYA, R.N., inzh.

Thermodynamic analysis of the theoretical cycle of a refrigeration nit with internal heat exchange. Trudy LTIKHP 5:15-28 '54.
(Refrigeration and refrigerating machinery) (MIRA 11:3)
(Heat pumps)

ROZENFEL'D, L.M.; KOSHKIN, N.N.

Dynamic heat insulation. Zhur.tekh.fiz. 24 no.1:96-102 Ja '54.
(MLRA 7:2)
(Refrigeration and refrigerating machinery) (Insulation (Heat))

ROZENFEL'D, L.M.

Modern methods for the production of moderately cold temperatures. Review by L.M.Rozenfel'd. Zhur.tekh.fiz. 24 no.1:113-148 Ja '54. (MLRA 7:2)
(Refrigeration and refrigerating machinery)

ROZENFEL'D, L., professor, doktor tekhnicheskikh nauk; MIKHAL'SKAYA, R., inzhener.

Analysis of non-recoverable losses in theoretical cycles of refrigerating machines with different working units. Kho.tekh.31 no.1:51-55 Ja-Mr '54. (MLRA 7:4)

(Refrigeration and refrigerating machinery)

ROZENFEL'D, L., professor, doktor tekhnicheskikh nauk.

Improved systems of direct evaporation. Khol.tekh. 31 no.4: 13-15 O-D '54. (MLRA 8:1)
(Refrigeration and refrigerating machinery)

ROZENFEL'D, LEV MARKOVICH

ROZENFEL'D, Lev Markovich, doktor tekhnicheskikh nauk, professor; TKACHEV, Anatoliy Georgiyevich, kandidat tekhnicheskikh nauk, dotsent; MARTYNOVSKIY, B.S., professor, doktor tekhnicheskikh nauk, retsenzent; BADYL'KES, I.S., professor, doktor tekhnicheskikh nauk, retsenzent; KOBULASHVILI, Sh.N., inzhener, retsenzent; NIKOLAYEVA, N.G., redaktor; SUDAK, D.M., tekhnicheskiy redaktor.

[Refrigerating machinery and apparatuses] Kholodil'nye mashiny i apparaty. Moskva, Gos.izd-vo torgovoi lit-ry, 1955. 584 p. Supplement - [Thermodynamic diagrams of refrigerator operating mechanisms] Termodinamicheskie diagrammy rabochikh tel kholodil'nykh mashin. 1955. 17 diagrs. (MLRA 8:4)

(Refrigeration and refrigerating machinery)

ROZENFEL'D, L.M.

Utilization of heat for decreasing irreversible losses in refrigerating machines. Zhur.tekh.fiz. 25 no.12:2233-2236 0'55. (MLRA 9:1)

(Refrigeration and refrigerating machinery)

112-57-8-16276

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 35 (USSR)

AUTHOR: Rozenfel'd, L. M., Onosovskiy, V. V., and Serdakov, G. S.

TITLE: An Experimental Installation for Heating and Cooling the Buildings at the Site of the Stalingrad State Electric Station Development (Opytnaya ustanovka dlya otopleniya i okhlazhdeniya zdaniy na ploshchadke stroitel'stva Stalingradskoy GES)

PERIODICAL: Tr. Leningr. tekhnol. in-ta kholodil'n. prom-sti (Transactions of the Leningrad Technological Institute for the Cooling Industry), 1956, Nr 14, pp 32-43

ABSTRACT: To check some conditions associated with the use of a thermal pump for heating the buildings of an electric station, an experimental installation was built and tested at the site of the Stalingrad State Electric Station. This installation, in the Station's Electrotechnical Laboratory, used refrigerating machines for heating during the winter and cooling during the summer. As a source of low-temperature heat for the thermal pump, water is taken from an artesian well; the water is preheated by an electric heater that is analogous

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An Experimental Installation for Heating and Cooling the Buildings at the Site ....

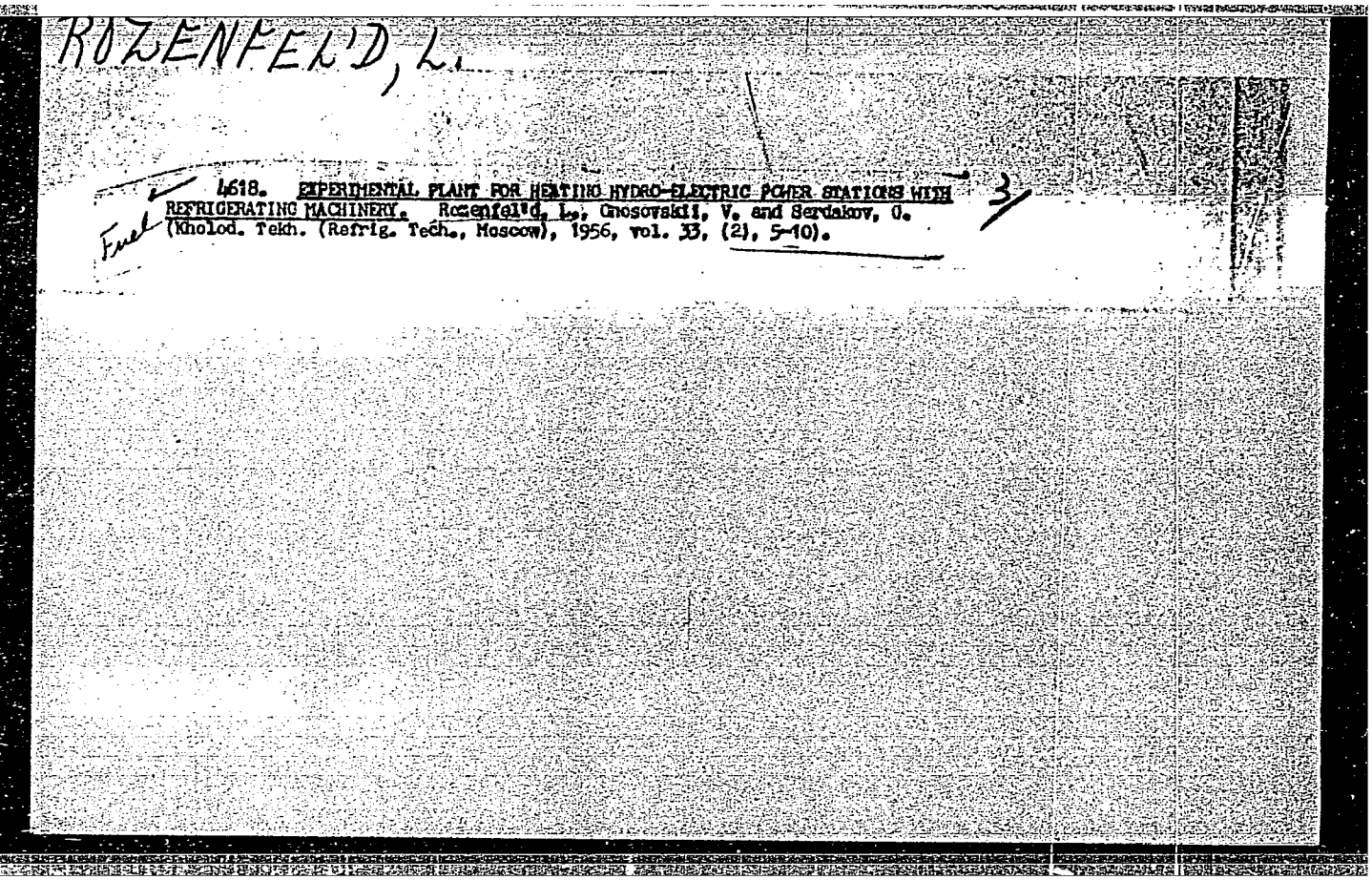
to a hydrogenerator having thermal losses but no output power. A single-stage freon-12 refrigerating machine was used as a thermal pump. Cold water at 5^{o}-10^{o} C was fed into an evaporator, where the heat yielded by the water brought freon-12 to the boiling point at a low pressure. Freon-12 vapor was admitted into a compressor, where it was brought up to the pressure corresponding to the condensation temperature necessary for the heating system. From the compressor, the vapor was channelled into a condenser in which the condensing vapor heated the water circulating in the heating system. The liquid freon-12 from the condenser was fed back into the evaporator with an intermediate throttling down to the pressure of the evaporator. Cold water from the evaporator was passed through an electric heater. The tests conducted in December, 1955, and in January, 1956, demonstrated the feasibility of utilizing thermal losses in hydrogenerators and transformers for heating of electric-station buildings. The thermal-pump heating system proved to be more economical than a separate heating boiler installation. Bibliography: Seven items.

V. Ya. G.

ROZENFEL'D, L.M.; ONOSOVSKIY, V.V.; SERDAKOV, G.S.

Experimental testing of the feasibility of adapting refrigerating machinery for heating and cooling buildings using heat produced in the operation of hydroelectric power stations. Zhur. t ekh. fiz. 26 no.9:2037-2045 S '56. (MLRA 9:11)

1. Tekhnologicheskiy institut kholodil'noy promyshlennosti, Leningrad.
(Heat pumps) (Hydroelectric power stations)
(Refrigeration and refrigerating machinery)



ROZENFEL'D, L.

Fuel

4618. EXPERIMENTAL PLANT FOR HEATING HYDRO-ELECTRIC POWER STATIONS WITH REFRIGERATING MACHINERY. Rozenfel'd, L., Gnosovskii, V. and Serdakov, O. (Kholod. Tekh. (Refrig. Tech., Moscow), 1956, vol. 33, (2), 5-10).

3

AUTHORS: Rozenfel'd, L.M. and Tkachev, A.G. 66-2-20/22

TITLE: "Refrigeration Machinery and Apparatus" (Kholodil'nye Mashiny i Apparaty), Gostorgizdat, 1955.

PERIODICAL: "Kholodil'naya Tekhnika" (Refrigeration Engineering) 1957, No.2, pp.74-75 (USSR).

ABSTRACT: University standard textbook containing a theoretical analysis of processes taking place in refrigeration machinery and also practical information.

This book is reviewed very favourably by Dr. of Technical Sciences, Prof. V. Survillo.

AVAILABLE:

Card 1/1

ROZENFEL'D, L., prof.; KHARITONOV, V., inzhener; ONOSOVSKIY, V., inzhener; MANUYLO, N., inzhener; ZHEBENKO, A., inzhener; BAKALLO, N., inzhener.

Testing the cooling equipment of the refrigerated ship "Aktiubinsk." Khol.tekh. 34 no.2:6-10 Ap-Je '57. (MIRA 10:10)
(Refrigeration and refrigerating machinery--Testing)
(Refrigeration on ships)

57-28-3-29/33

AUTHORS: Rozenfel'd, L. M., Karnaukh, M. S.

TITLE: An Enthalpy Diagram for the Lithium-Bromide Water Solution (Ental'piynaya diagramma dlya rastvora bromistyy litiy-voda)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol.28, Nr 3, pp.655-660 (USSR)

ABSTRACT: On the basis of few experimental data the attempt is made here to construct an enthalpy-diagram for the lithium-bromide water solution. The method of diagram construction is treated separately for the liquid and for the vapor phase of the solution. 1) The liquid phase. The integral heat of solution in an aqueous lithium-bromide solution at 25°C was experimentally (Reference 7) investigated. By the use of these data the 25°C-isothermal line in the concentration-enthalpy diagram can be constructed. For this the equation (1) for the enthalpy of the solution is used. As heat is liberated during the mixing process of lithium-bromide with water, q - denoting the integral heat of solution in equation (1) - has a

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negative sign. The specific heat of lithium bromide can be computed according to equation (2) from Reference 8 (by inserting the corresponding values for lithium bromide). By means of the tables by Professor Vukalovich (Reference 9) for water and steam the enthalpy values for the construction of the 25°C isothermal line are determined. The enthalpy values for water and crystalline lithium bromide were at 0°C both assumed as being equal to 100 kcal/kg. The experimental investigation of the specific heat of lithium-bromide solutions was performed in a wide temperature- and concentration range in 1954 - 1955 by the Central Institute for Steam Turbines imeni Polzunov (Tsentral'nyy kotloturbinyy institut im. Polzunova) and the Institute for Technology Leningrad imeni Lensovet (Leningradskiy tekhnologicheskiy institut im. Lensoveta). These data were used in the construction of the isothermal line network in the diagram. With the assumption of certain concentration values and a selection of mean values of the specific heat for the range of computation of the temperatures data for the construction of the isothermal lines at a spacing of 2°C respectively were obtained. These isothermal lines from 0 to 120°C were

An Enthalpy Diagram for the Lithium-Bromide Water Solution

entered into the concentration-enthalpy diagram. By means of the data on the steam pressure of a lithium bromide solution (Reference 10) auxiliary diagrams were constructed by means of which the temperature and concentration values for the isobars of from 2 to 700 torr. were found. With the aid of these data the isobaric network was entered into the concentration-enthalpy diagram.

2) The vapor phase. In the range of from 0 to 120°C the pressure of the lithium bromide vapors in comparison to that of water steam is very low. Therefore it can be disregarded. In this case the enthalpy of the vapor phase is determined according to the pressure and temperature values for the given concentration value. The water steam above the solution is in an overheated state. The numerical enthalpy values were determined by means of the tables by M. P. Vukalovich. In order to facilitate the manipulation of the diagram, auxiliary lines of constant pressure which correspond to the isobars of the liquid phase were entered above the lines for liquid phase of the solution. These lines represent the en-

An Enthalpy Diagram for the Lithium-Bromide Water Solution 57-28-3-29/33

thalpy values of the overheated water steam at a given pressure at the temperatures corresponding to the concentration values of the liquid phase. A short instruction for the use of the diagrams is given. There are 3 figures, 1 table, and 10 references, 8 of which are Soviet.

SUBMITTED: October 20, 1957

1. Bromide-lithium-water systems--Enthalpy 2. Enthalpy--Measurement

Card 4/4

AUTHORS: Rozenfel'd, L. M., Karnaukh, M. S. SOV/57-28-7-31/35

TITLE: Dynamic Heating by Means of a Reverse Absorption Lithium Bromide Machine (Dinamicheskoye otopleniye s pomoshch'yu obrashchennoy absorbtsionnoy bromisto-litiyevoy mashiny)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 7, pp. 1585-1591 (USSR) 1958

ABSTRACT: The first laboratory experimental refrigerating machine with a lithium bromide solution was produced in the USSR at the Institute for Thermal Power Engineering of the AS Ukrainian SSR (Ref 4). The theoretical investigation leads to the conclusion that it is expedient to use this solution as working material in a dynamic heating system. Therefore, with the aid by the Institute for Thermal Power Engineering of the AS Ukrainian SSR the existing experimental plant was mounted according to the reverse scheme, and by its means an experimental investigation was carried out. The results of this investigation are given. Based on these investigations the authors found the following: 1.) The aqueous lithium bromide solution can be used for a dynamic

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Dynamic Heating by Means of a Reverse Absorption Lithium Bromide Machine SOV/57-28-7-31/35

heating at the expense of the discharged heat in a system of combined cycles of the absorption reverse machine. 2.) The experiments showed a sufficient coincidence of the experimental results with those of the calculations. 3.) The use of this working material leads to a simplification of the system and to a decrease of the metal volume; it does, however, not supply a complete utilization of the temperature during the cold season at low temperatures. The advantage of the investigated system is the possibility to use it in summer for airconditoning. There are 3 figures, 4 tables, and 5 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti (Leningrad Technological Institute of Refrigeration Industry)

SUBMITTED: March 5, 1958

Card 2/3

Dynamic Heating by Means of a Reverse Absorption SOV/ 57-28-7-31/35
Lithium Bromide Machine

1. Heaters--Materials 2. Lithium bromide--Applications

Card 3/3

Rozenfel'd, L.

ROZENFEL'D, L., doktor tekhn.nauk, prof.; KARNAUKH, M., inzh.

Concentration - enthalpy diagram of a lithium bromide - water solution for calculating absorption refrigeration machines [with summary in English]. Khol. tekh. 35 no.1:37-42 Ja-F '58. (MIRA 11:2)

(Regrigeration and refrigerating machinery)

~~ROZENFELD, L. M.~~, KARNAUKH, M. S.

ROZENFELD, L. M.

"The Investigation of a Lithium Bromide Absorption Refrigeration and Heat-Pump Machine."

Report submitted for the 10th Intl. Refrigeration Congress, Copenhagen, 19 August - 2 September 1959.

ROZENFEL'D, L.M.

SOV/66-59-4-19/25

AUTHOR: None Given

TITLE: All-Union Scientific Technical Convention on Refrigeration Engineering

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 4, pp 61-65 (USSR)

ABSTRACT: Under the auspices of the Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti (Leningrad Technological Institute of Refrigeration Industry), of the Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti im. Mikoyana (All-Union Scientific Research Institute of Refrigeration Industry im. Mikoyan) and of the Vsesoyuznaya sektsiya kholodil'shchikov (All-Union Section of Refrigeration Workers), a convention was held in Leningrad from the 6 through 9 August, 1959, which was attended by 534 people. Below are given the names of the principal lecturers, the names of the institutions they represent and the titles of their lectures: V.Ya. Kokorev (Ministry of Trade of the RSFSR) "Tasks of Development and of Application of Refrigeration in the National Economy of the USSR"; T.V. Gogolina, Engineer (Central Designing Bureau of Refrigeration Machine Building) "Fields of Application of Refrigeration Equipment in Industry"; V.P. Irzhevskiy, Engineer (Odessa Designing Institute of Complex Automation of Production

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Processes in the Food Industry) "Orientation and Designing of Automatic Systems in Refrigeration Installations"; B.L. Tsyrlin, Engineer (VNIKhI) "Investigation of the Work of Compressors of the Piston Block-Crankcase Type"; V.B. Yakobson, Candidate of Technical Sciences (VNIKhI) "Investigation of Small Freon Compressors With Built-in Electric Motors"; D.M. Ioffe, Candidate of Technical Sciences (VNIKhI) "Analysis and Investigation of Heat-Exchanging Machinery with a Ribbed Heat Transmitting Surface"; L.M. Rozenfel'd, Professor and Doctor of Technical Sciences (Leningrad Technological Institute of Refrigeration Industry) "The Problem of Complete Utilization of Refrigeration Machines"; V.S. Martynovskiy, Professor and Doctor of Technical Sciences and B.B. Paruleykar, Professor (Odessa Technological Institute of Food and Refrigeration Industries) "Thermal Air Separation at the Cold End of the Vortex Tube"; I.P. Usyukin, Professor and Doctor of Technical Sciences (Moscow Institute of Chemical Machine Building) "Results of the Two Years Working Period of the Installation BR-1 and the Prospects of Producing Technological Oxygen"; A.I. Moroz, Candidate of Technical Sciences and B.V. Denisenchuk, Engineer (VNII of Oxygen Machine Building); K.I. Strakhovich, Professor and O.E. Ozhigov, Candidate of Technical Sciences (Leningrad Technological Institute of Re-

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frigeration Industry) "Theoretical Investigation of Expansion of Moist Vapor of the Air Turbo-Pressure-Reducer"; A.A. Gogolin, Candidate of Technical Sciences (VNIKhI) "Ways of Developing Air Conditioning Engineering in the USSR"; A.L. Satanovskiy, Engineer (Institute of Thermal Power Engineering of the AS USSR) "Air-Water-Evaporation Cooling and Air Conditioning on the Cranes in Hot Workshops"; L.K. Lozina-Lozinskiy, Professor and Doctor of Biological Sciences (Institute of Cytology of the AS USSR) "The Latest in the Doctrine Pertaining to the Influence of Low Temperatures on Organisms"; N.A. Golovkin, Professor and Doctor of Technical Sciences (Leningrad Technological Institute of Refrigeration Industry) "Mechano-Chemistry of the Muscular Tissue Under Refrigeration Processes of Food Products of Animal Origin"; D.G. Ryutov, Candidate of Technical Sciences and F.A. Alekseyev, Candidate of Technical Sciences (VNIKhI) "Conditions of Storage and Weight Losses of Frozen Meat in a Cold Room with Jacket Heat Protection"; A.P. Sheffer, Candidate of

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Technical Sciences and A.O. Saatchan (All-Union Scientific Research Institute of Meat Industry) "Single-Stage Freezing of Meat"; A.P. Chernogortsev (Astrakhan' Technical Institute of Fish Industry) "Proteolysis of Sprats and the Influence of Temperature on the Terms of Ripening and Storage of Sprat Preserves".

Card 4/4

BADYL'KES, I.S., prof., doktor tekhn.nauk; BUKHTER, Ye.Z., inzh.; VEYNBERG, B.S., kand.tekhn.nauk; VOL'SKAYA, L.S., inzh.; GERSH, S.Ya., prof., doktor tekhn.nauk [deceased]; GUREVICH, Ye.S., inzh.; DANILOVA, G.N., kand.tekhn.nauk; YEFIMOVA, Ye.V., inzh.; IOFFE, D.M., kand.tekhn.nauk; KAN, K.D., kand.tekhn.nauk; LAVROVA, V.V., inzh.; MEDOVAR, L.Ye., inzh.; ROZENFEL'D, L.M., prof., doktor tekhn. nauk; TKACHEV, A.G., prof., doktor tekhn.nauk; TSYRLIN, B.L.; SHUMELISHSKIY, M.G., inzh.; SHCHERBAKOV, V.S., inzh.; YAKOBSON, V.B., kand.tekhn.nauk; GOGOLIN, A.A., retsenzent; GUKHMAN, A.A., retsenzent; KARPOV, A.V., retsenzent; KURYLEV, Ye.S., retsenzent; LIVSHITS, A.B., retsenzent; CHISTYAKOV, F.M., retsenzent; SHEYNDLIN, A.Ye., retsenzent; SHEMSHEDINOV, G.A., retsenzent; PAVLOV, R.V., spetsred.; KOBULASHVILI, Sh.N., glavnyy red.; RYUTOV, D.G., zam.glavnogo red.; GOLOVKIN, N.A., red.; CHIZHOV, G.B., red.; NAZAROV, B.A., glavnyy red.izd-va; NIKOLAYEVA, N.G., red.; EYDINOVA, S.G., mladshiy red.; MEDRISH, D.M., tekhn.red.

[Refrigeration engineering; encyclopedic reference book in three volumes] Kholodil'naia tekhnika; entsiklopedicheskii spravochnik v trekh knigakh. Glav.red. Sh.N.Kobulashvili i dr. Leningrad, Gostorgizdat. Vol.1. [Techniques of the production of artificial cold] Tekhnika proizvodstva iskusstvennogo kholoda. 1960. 544 p. (MIRA 13:12)

(Refrigeration and refrigerating machinery)

ALEKSANDROV, S.V.---(continued) Card 2.

1. Vsesoyuznyy institut rasteniyevodstva (for Sechkarev, Lizgunova, Brezhnev, Gazenbush, Meshcherov, Filov, Tkachenko, Kazakova, Krasochkin, Levandovskaya, Shebalina, Syskova, Makasheva, Ivanov, Martynov, Girenko, Ivanova, Shilova). 2. Gribovskaya ovoshchnaya selektsionnaya opytnaya stantsiya; chleny-korrespondenty Vsesoyuzmoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Alpat'yev, Solov'yeva). 3. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Brezhnev).

(Vegetables--Varieties)

ROZENFEL'D, Lev Markovich, prof., doktor tekhn.nauk; TKACHEV, Anatoliy Georgiyevich, prof., doktor tekhn.nauk; GUREVICH, Yevgeniy Semenovich, inzh.; ONOSOVSKIY, V.V., inzh.; SERDAKOV, G.S., inzh.; TSYRLIN, B.L., inzh.; KALNIN', I.M., inzh.; ROMANOVSKIY, N.V., inzh.; YATSUNOV, I.F., inzh.; DANILOVA, G.N., dotsent; MIKHAL'SKAYA, R.N., inzh.; KARNAUKH, M.S., inzh.; STUKALENKO, A.K., inzh.; IL'IN, A.Ya., inzh.; TSIPERSON, A.L., red.; BABICHEVA, V.V., tekhn.red.

[Examples and designs of refrigerating machines and apparatus] Primery i raschety kholodil'nykh mashin i apparatov. Moskva, Gos. izd-vo torg.lit-ry, 1960. 237 p. [___Thermodynamic diagrams of the refrigerants used] ___Termodinamicheskie diagrammy rabochikh tel kholodil'nykh mashin. (MIRA 13:9)
(Refrigeration and refrigerating machinery)

VEYNBERG, Boris Samoylovich; ROZENFEL'D, L.M., prof., retsenzent; GUREVICH, Ye.S., inzh., retsenzent; MASLOVA, Ye.F., red.; MEDRISH, D.M., tekhn.red.

[Piston compressors of refrigerating machines] Porshnevye kompressory kholodil'nykh mashin. Moskva, Gos.izd-vo torg. lit-ry, 1960. 341 p. (MIRA 14:4)
(Compressors)
(Refrigeration and refrigerating machinery)

PHASE I BOOK EXPLOITATION SOV/4645

Rozenfel'd, Lev Markovich, Doctor of Technical Sciences, Professor, and Anatoliy Georgiyevich Tkachev, Doctor of Technical Sciences, Professor

Kholodil'nyye mashiny i apparaty (Refrigerating Machines and Devices) 2nd ed., rev. and enl. Moscow, Gostorgizdat, 1960. 656 p. 12,000 copies printed.

Reviewers: I.S. Badyl'kes, Doctor of Technical Sciences, Professor, and V.S. Martynovskiy, Doctor of Technical Sciences, Professor; Ed.: N.G. Nikolayeva; Tech. Ed.: D.M. Medrish.

PURPOSE: This is a textbook for use in a course entitled "Refrigerating Machines" for engineers specializing in refrigeration.

COVERAGE: The book is a revised and enlarged edition of the textbook published by the authors in 1955. The book discusses modern theory of various types of refrigerating machines, their structural designs, i.e., piston-, rotary-, and centrifugal-compressor machines and also steam-jet and absorption machines. On the basis of modern heat-transfer theory, the book considers the operation of components of refrigerating machines and their designs. Information is given on automation schemes for refrigerating machines. Chapter I, II, III, IV, V, VI, VII, VIII, X, XI, XVII, XVIII, and XIX were written by Doctor of Technical

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Sciences, Professor L.M. Rozenfel'd; Chapters XII, XIII, XIV, XV, and XVI by Doctor of Technical Sciences, Professor, A.G. Tkachev; Chapter IX by Engineer Ye.S. Guverich; and the section on the theory of similitude in Chapter III by Professor I.S. Badyl'kes. Collectives of the Kafedry kholodil'nykh mashin i teoreticheskikh osnov teplo - i khladotekhniki Leningradskogo tekhnologicheskogo instituta kholodil'noy promyshlennosti (Departments for Refrigerating Machines and the Theoretical Basis of Thermal and Refrigeration Engineering of the Leningrad Technological Institute of the Refrigeration Industry) participated in preparing the manuscript for publication. The authors thank G.S. Serdakov, V.V. Onosovskiy, R.N. Mikhal'skaya, G.N. Danilova, A.K. Stukalenko, A.Ya. Il'in, M.S. Karnaukh, O.N. Aleshunina, Ye.M. Kulekina, and V.S. Bochenkovaya. There are 118 references: 112 Soviet, 4 German, and 2 English.

TABLE OF CONTENTS:

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

Test of a heat pump air conditioning unit in a movie theater. Khol. tekh. 37 no.5:18-22 S-O '60. (MIRA 13:10)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.

(Theaters--Air conditioning)

ZAKHARENKO, Semen Yefremovich, prof.; ANISIMOV, Sergey Aleksandrovich, dots.; DMITREVSKIY, Vladimir Alekseyevich, dots.; KARPOV, Grigoriy Vasil'yevich, dots.; FOTIN, Boris Stepanovich, dots.; RUMYANTSEV, V.A., kand. tekhn. nauk, retsenzent; ROZENFEL'D, L.M., doktor, tekhn. nauk, retsenzent; LIFSHITS, S.P., kand. tekhn. nauk, red.; VASIL'YEVA, V.P., red. izd-va; DUDUSOVA, G.A., red. izd-va; SIMONOVSKIY, N.Z., red. izd-va; SHCHETININA, L.V., tekhn. red.

[Piston compressors] Porshnevye kompressory. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1961. 454 p. (MIRA 14:8)
(Compressors)

II 15273-66 EWT(m)/EWP(j) WW/RM
ACC NR: AP5028621 SOURCE CODE: UR/0030/65/000/010/0025/0031

AUTHOR: Kutateladze, S. S. (Doctor of technical sciences); Rozenfel'd, L. M. (Doctor of technical sciences) 53 B

ORG: none

TITLE: Problems in geothermal power engineering

SOURCE: AN SSSR. Vestnik, no. 10, 1965, 25-31

TOPIC TAGS: electric power production, heat energy conversion, heat pump, heat exchanger

ABSTRACT: The authors discuss the various thermal power resources hidden deep within the earth which show up as volcanic eruptions, geysers and hot springs. A design is proposed for a heat pump which uses the thermal power of underground springs. Water is pumped from a well into a freon evaporator and cooled. The freon vapor is then compressed and condensed under pressure. The heat from the compressed vapor is transferred to the water circulating in the heating system. This reduces energy losses by a factor of 4-6 in comparison with direct steam heating. The use of heat

UDC: 525.215+620.04

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L 15273-66
ACC NR: AP5028621

pumps for air conditioning units is discussed and the bromium-lithium absorption machine is recommended for temperatures above the freezing point of water, while the water-ammonium machine is recommended for temperatures below zero. The bromium-lithium absorption machine consists of two drums, a heat exchanger and pumps. The upper drum consists of a boiler and condenser, while the lower is made up of an absorber and an evaporator. The water from hot springs is fed to the boiler tube where the heat is used for boiling the water from an aqueous solution of lithium bromide. Tubes supplied with water from a cold spring are used for condensing the steam in the upper part of the drum. The condensed steam is cooled by a spray system in the lower drum and the water vapor is absorbed by a lithium bromide solution in the upper part of the drum. The lithium bromide is then fed through the heat exchanger to the boiler. The cold water is then used to absorb the heat from the ambient air. Methods are discussed for generating electricity by the use of subterranean heat sources. The capital outlay for geothermal electric power stations is high, however in certain regions they may be considerably more economic than conventional thermoelectric power stations. Orig. art. has: 4 figures.

SUB CODE: 10/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

EC

Card 2/2

ROZENFEL'D, L.M., kand. khim. nauk; NEYMAN, A.G., inzh.; VASIL'YEVA, T.D., inzh.

Autoclave processing, phase composition, and physicomechanical properties of gas-slag concrete. Stroi. mat. no.11.26-28 N '65. (MIRA 18:12)

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

Cementless autoclaved gas concrete made with fly ash and acid slags. Trudy NIIZHB no.32:178-202 '63. (MIRA 17:1)

ROZENFEL'D, L.M., doktor tekhn.nauk, prof.; KARNAUKH, M.S., inzh.

Lithium bromide absorption refrigerating machine. Khim.mash. no.4:4-6 Jl-Ag '62. (MIRA 15:7)
(Refrigeration and refrigerating machinery)

ROZENFEL'D, L. Ya. (Co-author)

See: SEMKO, M. F.

Semko, M. F. and Rozenfel'd, L. Ya. - "Working EZh-1 steel by the speed milling method," Nauch. zapiski Khar'k. mekhan.-mashinostroit. in-ta, Vol. IX, Issue 1, 1948, p. 89-98

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

VOSTRODOVSKIY, A.V.[deceased]; BRUK, S.I.; LIVSHITS, B.I.; MIRKIN, M.S.; ROZENFEL'D, M.A.; SIMIN, S.Kh.; TREBNIK, Ya.L.; GARBARUK, V.N., kand. tekhn.nauk, retsenzent; VAKSER, D.B., dots., red.; VARKOVETSKAYA, A.I., red.izd-va; SHCHETININA, L.V., tekhn. red.

[Technology of the manufacture of knitting machines] Tekhnologiia trikotazhnogo mashinostroeniia. [By] A.V.Vostrodovskii i dr. Moskva, Mashgiz, 1963. 266 p. (MIRA 16:8)
(Knitting machines)

OVCHINNIKOV, Boris Dmitriyevich; MOROZOVA, Tamara Viktorovna; ROZENFEL'D, Mikhail Davydovich; BABITSKIY, Boris Lazarevich; FILIPPOVA, L.S., red.; SOLOV'YEVA, T.P., red.

[Use of new polymeric materials in insulating rail joints and switches] Primenenie novykh polimernykh materialov v izoliruiushchikh stykakh i strelochnykh perevodakh. Moskva, Izd-vo "Transport," 1964. 25 p. (MIRA 17:9)

BABITSKIY, B.L.; ROZENFEL'D, M.D.; MORGAYEV, V.N.; STROCHKOV, A.A.

Insulation of the connected bands. Put' i put.khoz. 7 no.7:34 '63. (MIRA 16:10)

VLASENKO, V.M.; KRUGLOV, B.I.; ROZENFEL'D, M.G.; RUSOV, M.T.; SICHKOV, P.V.

Change of properties of zinc-chromium catalysts in the course of isobutyl alcohol production. Khim.prom. no.4:244-248 Ap '62. (MIRA 15:5)

(Isobutyl alcohol) (Catalysts)

VLASENKO, V.M.; KUKHAR', L.A.; ROZENFEL'D, M.G.; RUSOV, M.T.

State of the promoting potassium salt added to a zinc-chromium catalyst of isobutyl alcohol synthesis. Khim.prom. no.9:555-558 Ag '62. (MIRA 15:9)
(Isobutyl alcohol)
(Catalysts)

VLASENKO, V.M.; ROZENFEL'D, M.G.; RUSOV, M.T.

Investigationg the macrokinetics of the synthesis of methyl alcohol on an industrial catalyst at high pressures. Khim. prom. 40 no.8:577-582 Ag '64. (MIRA 18:4)

VLASENKO, V.M.; GLUKHOVA V.G.; MIKHALEVA, F.F.; ROZENFEL'D, M.G.; RUSOV, M.T.; SICHKOV, P.V.

Changes in the properties of zinc-chromium catalysts during the production of methyl alcohol. Khim. prom. 42 no.9:664-666 S '65. (MIRA 18:9)

VLASENKO, V.M.; KRUGLOV, B.I.; ROZENFEL'D, M.G.; RUSOV, M.T.

Preparation and regeneration of zinc-chromium catalysts in the synthesis of alcohols. Khim.prom. no.1:1-6 Ja '61. (MIRA 14:1)
(Alcohols) (Catalysts)

BUI GUI., DAP; VO VAN SHU; ROZENFEL'D, M.I. [transulator]

Effect of temperature in combination with various day-lengths on the growth and development of rice in Vietnam. Agrobiologiia no.1:42-47 Ja-F '60. (MIRA 13:5)

1. Institut sel'skogo i lesnogo khozyaystva, g. Khanoy. Demokraticheskaya Republika V'yetnama.
(Vietnam, North--Rice)

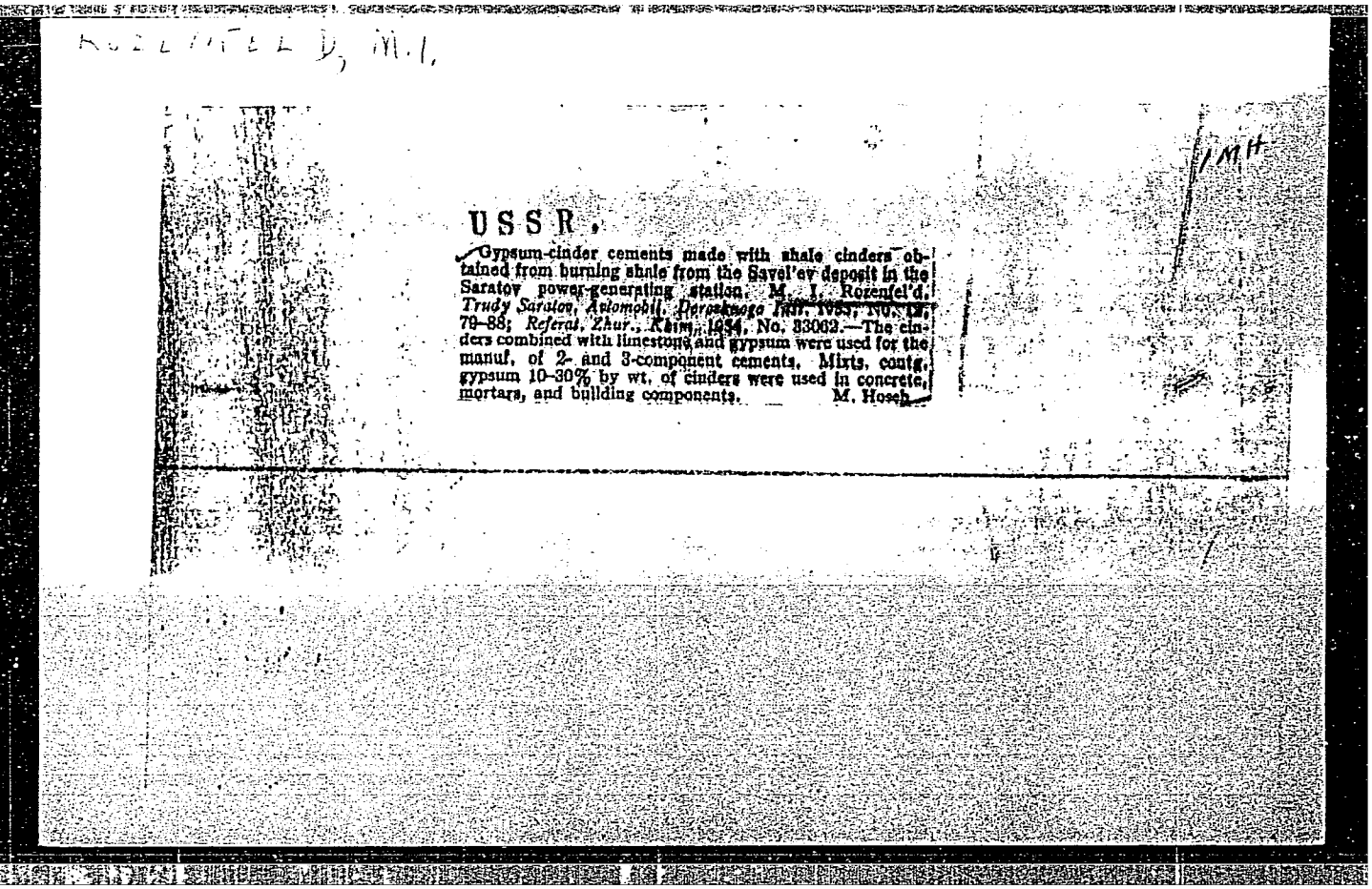
BUI GUI DAP (Demokraticheskaya Respublika V'yetnama); NGUYEN DU SHUAN, assistant (Demokraticheskaya Respublika V'yetnama); ROZENFEL'D, M.I. [translator]

Photoperiod of some Vietnamese rice varieties. Agrobiologiia no.2:220-230 Mr-Ap '59. (MIRA 12:6)
(Vietnam, North--Rice--Varieties)
(Photoperiodism)

ELLERSTREM, S. [Ellerström, S.] (Shvetsiya); ROZENFEL'D, M.I. [translator]

Work with polyploids in the Swedish Society for the Breeding of Agricultural Crops. Agrobiologiia no.1:135-146 Ja-F '63. (MIRA 16:5)

(Sweden--Plant breeding) (Polyploidy)



USSR

Gypsum-cinder cements made with shale cinders obtained from burning shale from the Savel'ev deposit in the Saratov power-generating station. M. I. Rozenfel'd. *Trudy Saratov. Avtomobil. Dorozhnogo Inst.* 1953, No. 13, 79–88; *Referat. Zhur., Khim.* 1954, No. 33002.—The cinders combined with limestone and gypsum were used for the manuf. of 2- and 3-component cements. Mixts. contg. gypsum 10–30% by wt. of cinders were used in concrete, mortars, and building components. M. Hosch

ROZENFEL'D, M.I.

Downy mildew on peas. Zashch. rast. ot vred. i bol. 8 no.6: 48 Je '63. (MIRA 16:8)

LYSENKO, T.D.; OL'SHANSKIY, M.A.; SINYAGIN, I.I.; GLUSHCHENKO, I.Ye.; VARUNTSYAN, I.S.; PREZENT, I.I.; SHCHERBINOVSKIY, N.S.; SHUNKOV, V.I.; YEVSTIGNEYEV, S.N.; BOCHEVER, A.M.; LITVIN, V.M.; YAYKOVA, A.T.; PODVOYSKIY, I.I.; SAKS, Ye.I.; KHALIFMAN, I.A.; FEYGINSON, N.I.; SHCHEGLOVA, Yu.N.; DLUGACH, G.V.; STERNIN, R.A.; LISOVSKAYA, O.V.; GUBINA, T.I.; ROZENFEL'D, M.I.; TSVETAYEVA, Ye.M.; PARKHOMENKO, Ye.V.; NEYMAN, N.F.

Sofia IAkovlevna Voitinskaia; an obituary. Agrobiologiia no.4:121 Jl-Ag '58. (MIRA 11:9)
(Voitinskaia, Sofi'ia Iakovlevna, 1898-1958)

NYUBOM, N. [Nybom, N.]; GROSSMAN, L.G. [translator]; ROZENFELD, M.I. [translator]; NEYMAN, N.F. [translator].

Applying induced mutation in plant breeding. Agrobiologiia no.6: 44-49 N-D '58. (MIRA 12:1)
(Plant breeding) (Botany--Variation)

NYUBOM, N. [Nybom, N.]; GROSSMAN, L.G.[translator]; ROZENFELD, M.I.[translator]

Using induced mutation in plant breeding. Agrobiologiia no.5:15-28 S-O '58. (MIRA 11:11)
(Plant breeding) (Botany--Variation)

ROZENFEL'D, M. I.

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The possibility of the use of domestic cements based on a siliceous marl and shale ash for making heavy building blocks. M. I. Rozenfel'd and G. N. Vlasova. *Trudy Saratov. Aviatsion. Dorozh. Inst. im. V. M. Molotova* 1955, No. 13, 129–39.—As one of the possibilities for meeting the accelerated demands for materials for new dwelling construction the possibility of making heavy building blocks with the use of (I) a siliceous marl, (II) lime, (III) shale ash, (IV) portland cement, and (V) gypsum plaster in various combinations was investigated. The compn. of the shale ash ground to 50% through 10,000/sq. cm. was: SiO_2 44.1; Al_2O_3 14.0, Fe_2O_3 6.89 CaO 28.5, MgO 1.76, and SO_3 3.5%. The marl ran from 70 to 97% SiO_2, some of it in the amorphous form. The materials ground in the wet pan were molded in blocks 15×15×15 cm., which after seasoning for 8 hrs. were finished in the steam chamber at 70°. Special attention was paid to the frost resistance test whereby the specimen was frozen at −20°, followed by thawing, for a succession of 10 to 20 cycles. Typical results on a mix of 75% III, 15% IV, and 10% V showed a crushing resistance of 210 kg./sq. cm. and a sp. gr. of 1.95; 65% III, 15% IV and 20% V, 80 kg./sq. cm and 1.77 sp. gr.; 80% I and 20% II, 39 kg./sq. cm. and 1.4 sp. gr. On the basis of all tests including resistance to frost the use of these blocks for both foundations and walls is recommended. H. L. Olin

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ROZENFEL'D, M. I.

ROZENFEL'D, M. I. --"Gypsum-Ash Cements on the Base of Powdery Ash of Savel'yevsk Bituminous Shale." (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions)(29) Min of Construction of Enterprises of the Metallurgical and Chemical Industry USSR, Central Sci Res Inst of Industrial Structures TsNIPs, Moscow, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Technical Sciences

ANDRIANOV, B.A.; KOTLYAR, L.Ye.; MANOLE, M.G.; ROZENFEL'D, M.N.; SADETSKIY, A.A.; FINKEL'SHTEYN, Ya.M.; LEPESHINSKAYA, Ye.V., redaktor; TUMORKINA, N.A., tekhnicheskiy redaktor

[Rumanian-Russian polytechnical dictionary] Rumynsko-russkii politekhnicheskii slovar'. Sost. B.A.Andrianov i dr. Pod red. M.G. Manole. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 715 p. (MLRA 10:3)

(Rumanian language--Dictionaries--Russian)
(Technology--Dictionaries)

MANOLE, M.G.; ANDRIANOV, B.A.; KOTLIAR, L.Ye.; ROZENFEL'D, M.N.; SADETSKIY, A.A.; FINKEL'SHTEYN, Ya.M.

[Russian Rumanian technical dictionary] Russko-rymynskii politekhnicheskii slovar'. Sostavili B.A.Andriakov [i.dr.] Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1953. 820 p. (MLRA 7:3)
(Russian language--Dictionaries--Rumanian)
(Technology--Dictionaries)

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva); PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof. (Leningrad); ADO, A.D., prof.; VOVSI, M.S., prof.; YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan'); PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P., prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk); KHMEL'CHONOK, I.P. (Irkutsk); TEMKIN, Ya.S., prof. (Moskva); MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor med.nauk (Leningrad); TRUTNEV, V.K., zasluzhennyy deyatel' nauki, prof.; TSYRESHKIN, B.D., kand.med.nauk (Moskva); SOBOL', I.M., prof. (Stavropol'); TURIK, G.M. (Moskva); FRENKEL', M.M. (Moskva); MAZO, I.L.; POKRYVALOVA, K.P.; PROSKURYAKOV, S.A., prof.; ATKARSKAYA, A.A., prof.; GOL'DFARB, I.V., prof. (Izhevsk); PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; VOL'FSON, I.Z., prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin); ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg); MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N., prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G., prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha, gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59.
(MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for Ado). 2. Direktor Moskovskogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).
(OTORHINOLARYNGOLOGY—CONGRESSES)

1. ROZENFEL'D, M. S.

2. USSR (600)

4. Actinomycosis

7. Maxillo-facial actinomycosis and methods of its treatment, Stomatologia, No. 4, 1952.

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

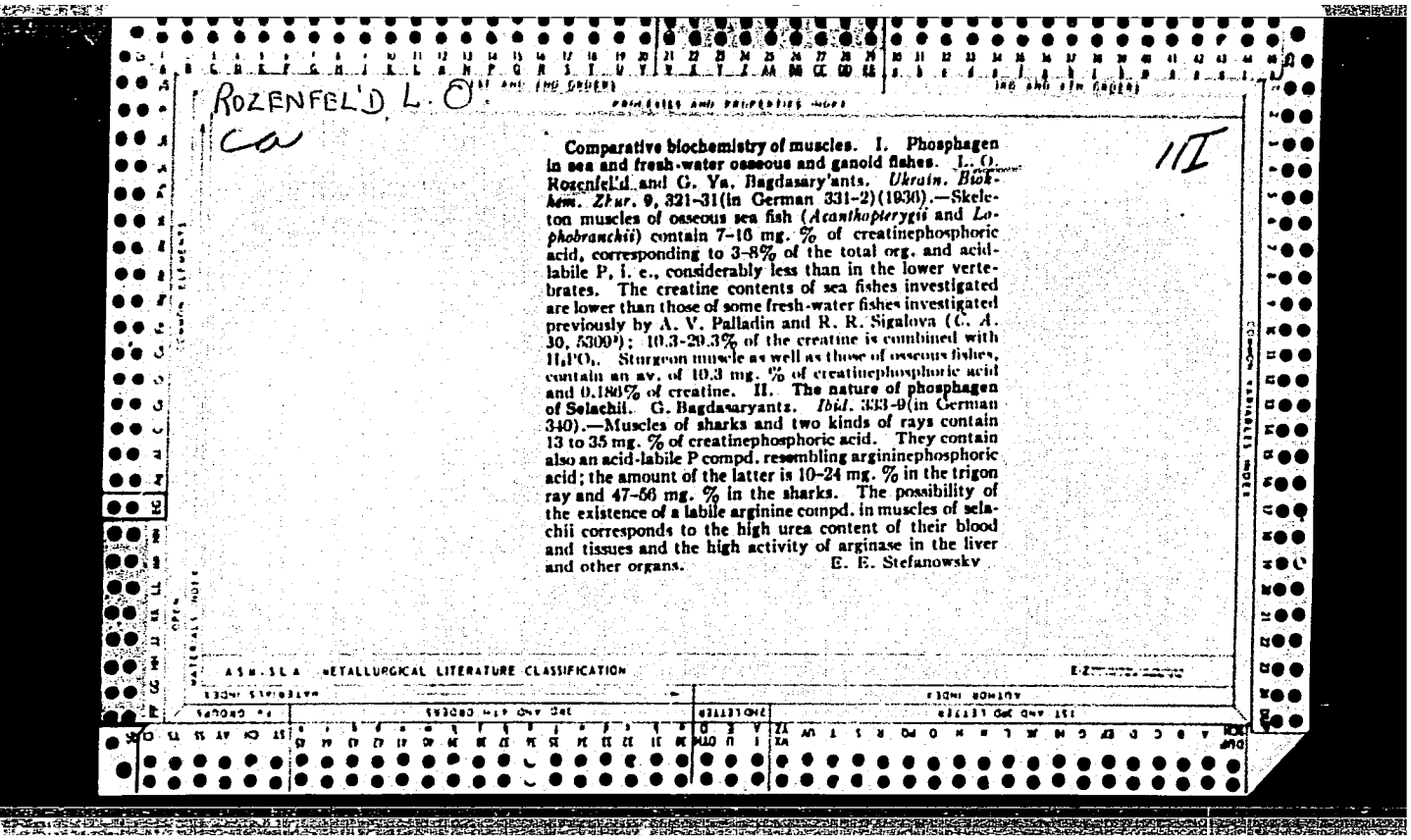
1. ROZENFELD, M. S.

2. USSR (600)

4. Face - Diseases

7. Maxillo-facial actinomycosis and methods of its treatment. Stomatologiia no. 4, 1952.

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



ROZENFEL'D L. O.

Ca

II I

Comparative biochemistry of muscles. I. Phosphagen in sea and fresh-water osseous and ganoid fishes. L. O. Rozenfel'd and G. Ya. Bagdasary'ants. *Ukrain. Biokhem. Zhur.* 9, 321-31(in German 331-2)(1936).—Skeleton muscles of osseous sea fish (*Acanthopterygii* and *Lophobranchii*) contain 7-16 mg. % of creatinephosphoric acid, corresponding to 3-8% of the total org. and acid-labile P, i. e., considerably less than in the lower vertebrates. The creatine contents of sea fishes investigated are lower than those of some fresh-water fishes investigated previously by A. V. Palladin and R. R. Sigalova (*C. A.* 30, 5309[9]); 10.3-20.3% of the creatine is combined with H_3PO_4. Sturgeon muscle as well as those of osseous fishes, contain an av. of 10.3 mg. % of creatinephosphoric acid and 0.186% of creatine. II. **The nature of phosphagen of Selachii.** G. Bagdasaryants. *Ibid.* 333-9(in German 340).—Muscles of sharks and two kinds of rays contain 13 to 35 mg. % of creatinephosphoric acid. They contain also an acid-labile P compd. resembling argininephosphoric acid; the amount of the latter is 10-24 mg. % in the trigon ray and 47-56 mg. % in the sharks. The possibility of the existence of a labile arginine compd. in muscles of selachii corresponds to the high urea content of their blood and tissues and the high activity of arginase in the liver and other organs. E. E. Stefanowskv

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ROZENGART, M.I.; KUZNETSOVA, Z.F.; GITIS, K.M.

Role of an alkali promoter in the development of an aluminum-chrome catalyst for the dehydrocyclization of paraffin hydrocarbons. Neftekhimiia 5 no.1:17-23 Ja-F '65. (MIRA 18:5)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.