SOV/153-58-3-27/30

Approximate Equations of the Kinetics of the Desorption Process

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet) Kafedra protsessov i apparatov (Chair of Methods and Apparatus)

SUBMITTED: January 1, 1958

Card 3/3

ROMANKOV, P.G., prof.; BAO CHZHI-TSYUAN' [Pao Chih-ch'üan], kand.tekhn.nauk
KUROCHKINA, M.I.

Some problems on the theory and practice of extraction from solid materials. Khim. nauka i prom. 3 no.4:506-511 '58.
(MIRA 11:10)

(Extraction (Chemistry))

SIYRDE, E.K. [Siirde, E.K.]; ROMANKOV, P.G.

Investigation of the process of steam distillation. Zhur.prikl. khim. 31 no.12:1817-1823 D '58. (MIRA 12:2)

1. Tallinnskiy politekhnicheskiy institut.
(Distillation)

ROMANKOV, P.G.; STABNIKOV, V.N.; MEDVEDEV, A.A.

Aleksandr Kirillovich Krupskii (1845-1911). Trudy LTI no.46:3-16 '58. (MIRA 14:4)
(Krupskii, Aleksandr Kirillovich, 1845-1911)
(Chemistry, Technical)

RAYALO, G.Yu.; ROMANKOV, P.G.

Separation of binary mixtures by steam distillation in wetted-wall columns. Trudy LTI no.46:147-161 '58. (MIRA 14:4)
(Distillation) (Mass transfer)

PAVLOV, K.F., ROMANKOV, P.G., prof.; NOSKOV, A.A.; KUROCHKINA, M.I., red.; KOTS, V.A., red.; ERLIKH, Ye.Ya., tekhn.red.

[Examples and problems in a course on the processes and equipment of chemical technology] Primery i zadachi po kursu protsessov i apparatov khimicheskoi tekhnologii. Izd.4, dop. i perer. Pod obshchei red. P.G.Romankova. Leningrad, Gos. nauchno-tekhn.izd-vo khim.lit-ry, 1959. 573 p. (MIRA 13:2)
(Chemistry, Technical)

25(2) SOV/64-59-1-15/24

AUTHORS: Romankov, P. G., Doctor of Technical Sciences, Yablonskiy, P.A., Candidate of Technical Sciences

TITLE: The Influence of Various Internal Devices in the Separator With Revolving Breaking Blades Upon the Efficiency of Classification (O vliyanii razlichnykh vnutrennikh ustroystv v separatore s vrashchayushchimisya otboynymi lopatkami na effektivnost' klassifikatsii)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 1, pp 68-70 (USSR)

ABSTRACT: In a former paper (Ref 1) equations (1) and (2) on the extraction of the fine fraction and for the Galilean criterion for experimental separators without internal devices (Fig 1) were derived. In the present case experimental results are given for the following types of classifcator: figure 1 without internal device, figure 2 with two deflectors, figure 3 with one deflector, figure 4 with a derivation of the products from the mixing zone of the blades for repeated classifcation. A barite was classified, the value Re was constantly 5450, and the residue was determined on a control screen with 63 μ. Graphic representations (Figs 1-5) of the experimental results show that the work with the classificator (Fig 4) does not

Card 1/2

The Influence of Various Internal Devices in the Separator With Revolving Breaking Blades Upon the Efficiency of Classification

offer advantages but disadvantages, that the efficiency of the types mentioned in figures 1 and 2 is about the same, but that with reference to the residue on the control screen the construction scheme of figure 1 is most adequate. A table of the individual data of the 4 types of classification is given. There are 5 figures, 1 table and 1 Soviet reference.

5(4) SOV/80-32-5-16/52

AUTHORS: Medvedev, A.A., Romankov, P.G.

TITLE: Some Problems of the Analogy of Diffusion and Thermal Processes. Communication I.

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1021-1029 (USSR)

ABSTRACT: The study of diffusion processes is based on the analogy between the phenomena of diffusion and thermal conductivity. The difference of both processes is investigated here using the mass transfer in a binary solution. This mass transfer is typical for many processes of chemical technology, especially in a solid body-liquid system. The diffusion coefficient characterizes the spreading of concentration in space and may be called coefficient of concentration conductivity. The diffusion coefficient D covers inertia as well as mass transfer properties of the system. It may be regarded as analogous to the coefficient of temperature-conductivity a, but not to the coefficient of heat-conductivity λ. The criteria of the diffusion similarity are not complete analogies of the corresponding criteria of the thermal similarity. The criteria derived from boundary conditions, like Nu', Bi' and Ki' hold a special place. In most cases

Card 1/2

Some Problems of the Analogy of Diffusion and Thermal Processes. Communication I.

the criteria Nu' and Ki' can be determined. In other cases there is a numerical difference which is caused by the dependence of the chemical potential of the component on its concentration. Thanks to the applied method of the thermodynamics of irreversible processes the mentioned conclusions have a strictly scientific base and sufficiently general significance.
There are: 4 graphs and 21 references, 5 of which are Soviet, 7 German, 6 English, 2 American and 1 French.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: December 24, 1958

Card 2/2

5.1160

75663
SOV/80-32-10-12/51

AUTHORS: Siyrde, E. K., Romankov, P. G.

TITLE: Investigation of Steam Distillation (Communication II)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2197-2207 (USSR)

ABSTRACT: This is a study of the variables affecting vaporization efficiency φ by means of dimensional analysis and experiment,

$$\varphi = \frac{P_1}{P_1^*}, \qquad (3)$$

where P_1 is the actual partial pressure of the substance being distilled, and P_1^* is its equilibrium vapor pressure at the distillation temperature. The following substances were steam-distilled both in two- and three-phase systems: CCl_4 (bp 76.8° C), C_6H_6 (80.1),

Card 1/5

$C_6H_5CH_3$ (110.8), $C_6H_4(CH_3)_2$ (139.3), turpentine (154-6), $C_6H_5NH_2$ (184.4), $C_6H_5NO_2$ (210.9), $C_{10}H_8$ (217.9), $C_{10}H_7OH$ (285-6), shale phenol (240-260), shale tar (300-320), oleic acid (360, decomposes). The following variables were studied individually, the other determining variables remaining constant: Fr; M_1P_1/M_0P_0; μ_L/μ, γ_L/γ, and σ/γ_L; S_A/S_0; h, and D_A/h_0, where M_1 is the molecular weight of the substance being distilled, M_0 is the molecular weight of steam; S_A is the apparatus cross section; S_0 is the sum of the steam nozzle cross sections, D_A is the apparatus diameter; h_0 is the minimum liquid layer depth which will not affect φ; σ is the surface tension; γ is the specific weight; and L refers to the liquid. M_1P_1/M_0P_0, referred to as the composition cri-

terion, was experimentally shown to reflect the properties of the substance studied; consequently, the γ, μ, σ, and Pr of the distilling substance were dropped from consideration. Three regimes of bubbling were defined, and the following dimensionless formulas were derived. Bubble regime:

$$Fr^{-0.12}\left(\frac{M_1P_1}{M_0P_0}\right)^{-0.13}\left(\frac{S_A}{S_0}\right)^{0.28}\left(\frac{D_A}{h_0}\right)^{-0.48} > 0.84, \qquad (22)$$

$$\varphi = 1.0. \qquad (19)$$

foam regime:

$$0.84 > Fr^{-0.12}\left(\frac{M_1P_1}{M_0P_0}\right)^{-0.13}\left(\frac{S_A}{S_0}\right)^{0.28}\left(\frac{D_A}{h_0}\right)^{-0.48} > 0.735, \qquad (23)$$

$$\varphi = 1.17Fr^{-0.12}\left(\frac{M_1P_1}{M_0P_0}\right)^{-0.13}\left(\frac{S_A}{S_0}\right)^{0.28}\left(\frac{D_A}{h_0}\right)^{-0.48} \qquad (20)$$

Jet regime:

$$Fr^{-0.12}\left(\frac{M_1P_1}{M_0P_0}\right)^{-0.13}\left(\frac{S_A}{S_0}\right)^{0.28}\left(\frac{D_A}{h_0}\right)^{-0.48} < 0.735 \qquad (24)$$

$$\varphi = 5.52Fr^{-0.48}\left(\frac{M_1P_1}{M_0P_0}\right)^{-0.48}\left(\frac{S_A}{S_0}\right)^{1.0}\left(\frac{D_A}{h_0}\right)^{-2.5} \qquad (21)$$

The above inequalities were experimentally justified within the following ranges:

$$40 < \frac{S_A}{S_0} < 1785; \quad 1.485 < \frac{D_A}{h_0} < 4.25; \quad 0.18 < \frac{M_1P_1}{M_0P_0} < 22.4; \qquad (25)$$

$$300 < Fr < 700\,000.$$

Investigation of Steam Distillation (Communication II)

75663
SOV/80-32-10-12/51

Equations 19, 20, and 21 were also found applicable to the case of steam admittance through a grid; in this case S_0 is the sum of the grid openings. There are 3 tables; 10 figures; and 10 references, 1 German, 9 Soviet. One Soviet reference associated with Cary, James S., is a 1937 translation of John H. Perry's Chemical Engineering Handbook (U.S.).

ASSOCIATION: Tallin Polytechnic Institute (Tallinskiy politekhnicheskiy institut)

SUBMITTED: April 10, 1959

Card 5/5

BOLOTNIKOV, F.S.; ROMANKOV, P.G.

Dimensionless equation of mass transfer for an inclined pulsed extractor. Zhur. prikl. khim. 37 no.2:310-317 F '64.
(MIRA 17:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; BEREZOVSKAYA, Z.A.

New method of drying paste-like pigments. Lakokras.mat.i ikh prim. no.3:71-74 '60. (MIRA 14:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Pigments--Drying)

G/002/60/000/012/001/005
A075/A026

AUTHOR: Romankov, P.G. (Leningrad)

TITLE: Application of the Similitude Theory to Studies of Chemotechnological Processes

PERIODICAL: Chemische Technik, 1960, No. 12, pp. 699 - 702

TEXT: The theory allows to describe basic operations of the chemical technology as e.g. heat- and diffusion operations, hydraulic operations and chemical reactions. Similitude criterions: till now there are no uniform similitude criteria. The existing similitude criteria should be used to describe experimental data. The criteria of heat transfer should be used on describing diffusion operations. In the following a formula is derived characterizing the nature of analogy between the classic equation of diffusion by A. Fick and of heat conduction by Fourier. The application of the similitude theory to studying chemical processes is difficult because chemical processes mostly are very complicated. Therefore a simplification of the chemical processes is necessary. An exact formulation of the limiting conditions is necessary for any mathematical description of a process. Soviet researchers have tried in the past to apply thermodynamical methods to the

Card 1/2

G/002/60/000/012/001/005
A075/A026

Application of the Similitude Theory to Studies of Chemotechnological Processes

analysis and description of chemotechnological processes. It is necessary to write the generally used similitude criteria uniformly. There are 30 references: 16 Soviet, 4 German, 6 American, 1 English, 1 Dutch, 1 Australian and 1 Polish.

ASSOCIATION: Leningrad Technological Lensoviet Institute

SUBMITTED: November 24, 1959

Card 2/2

85289

S/153/60/003/005/014/016
B013/B058

11.9000

AUTHORS: Yablonskiy, P. A., Romankov, P. G.

TITLE: Physical Significance of Some Similitude Criteria, and Their Influence on the Heat Transfer Coefficient of Liquids

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 5, pp. 928-932

TEXT: The applicability of equations based on the theory of similitude for the practical calculation of the influence of physical properties of liquids on the heat-transfer intensity, as well as for thermodynamic calculations of chemical apparatus, is analyzed in this paper. The following conclusions were drawn from this analysis: 1) The calculation of the influence of physical properties of liquids on the heat-transfer intensity, customary in publications, which starts from the functional dependence of the Nusselt, Reynolds, Prandtl and Grashof criteria, shows that the Nusselt index increases with an increase of the Prandtl number (Pr) and constant Reynolds number (Re). The increase of the Pr number is, however, correlated with an increase of the kinematic viscosity ν. This

Physical Significance of Some Similitude Criteria, and Their Influence on the Heat Transfer Coefficient of Liquids

S/153/60/003/005/014/016
B013/B058

leads simultaneously to a decrease of the Re number. The actual consumption of liquid must, therefore, be increased to warrant Re = const. A calculation made in this way of the influence of physical parameters on the heat-transfer coefficient is not justified in practical calculations.
2) Thermodynamic calculations of chemical apparatus: a) At a given size of the apparatus, the liquid consumption can directly be calculated from the equations for turbulent and laminar flow at Pr = const., since the flow velocity is only contained in the Reynolds number. b) For the calculation of the influence of physical properties on the heat-transfer coefficient, the index equations for turbulent, laminar, and free flows are to be brought into the form $\alpha = f(Pr^{-n})$ or $\alpha = f_1(Pr^{-m})$, at a constant consumption of liquid and equal d. From equations solved according to the heat-transfer coefficient α, it follows that an increase of the Prandtl number reduces the intensity of heat transfer at the same flow velocity w. S. S. Kutateladze is mentioned. There are 2 Soviet references.

Card 2/3

86389

Physical Significance of Some Similitude Criteria, and Their Influence on the Heat Transfer Coefficient of Liquids

S/153/60/003/005/014/016
B013/B058

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta, Kafedra protsessov i apparatov (Leningrad Technological Institute imeni Lensovet, Department of Processes and Apparatus)

SUBMITTED: March 23, 1959

Card 3/3

KUROCHKINA, M.I.; ROMANKOV, P.G.

Kinetics of desorption from a porous adsorbent under conditions of internal diffusion. Zhur. prikl. khim. 33 no.11:2497-2506 N '60. (MIRA 14:4)

1. Kafedra protsessov i apparatov Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.
(Desorption)

KUROCHKINA, M.I.; ROMANKOV, P.G.

Kinetics of desorption from a porous adsorbent in a fluidized bed. Zhur. prikl. khim. 33 no.12:2657-2664 D '60. (MIRA 14:1)

1. Kafedra protessov a apparatov Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.
(Desorption)

LEPILIN, V.N.; RASHKOVSKAYA, N.B.; ROMANKOV, P.G.

Some aspects of adsorption and desorption in a fluidized bed of the adsorbent. Zhur. prikl. khim. 33 no.12:2664-2671 D '60. (MIRA 14:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Adsorption) (Desorption)

ROMANKOV, P. G., PAVLUSHENKO, I. S., BRACHINSKIY, L. N., and SMIRNOV, N.N.

"Influence of Mechanical Mixing on Mass Transfer Processes with Chemical Conversions."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

ROMANKOV, P. G.

"General Kinetic Regularities of Mass Transfer, in the System Solid-liquid (gas)."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

PLANOVSKIY, Aleksandr Nikolayevich; GUREVICH, Daniil Abramovich; MASANOV, N.I., retsenzent; ROMANKOV, P.G., doktor tekhn. nauk, prof., retsenzent; PAVLUSHENKO, I.S., kand. khim. nauk, dots., retsenzent; PASSET, B.V., kand. khim. nauk, retsenzent; AZBEL', D.S., red.; SHPAK, Ye.G., tekhn. red.

[Apparatus for the industry of organic intermediate products and dyes] Apparatura promyshlennosti organicheskikh poluproduktov i krasitelei. Moskva, Goskhimizdat, 1961. 504 p. (MIRA 15:6)
(Dyes and dyeing--Apparatus)
(Chemical apparatus)

PAVLOV, K.F.; ROMANKOV, P.G., prof.; NOSKOV, A.A.; KUROCHKINA, M.I., red.; KOTS, V.A., red.; ERLIKH, Ye.Ya., tekhn. red.

[Examples and problems for a course on the processes and equipment of chemical technology] Primery i zadachi po kursu protsessov i apparatov khimicheskoi tekhnologii. Izd.5., ispr. Pod obshchei red. P.G.Romankova. Leningrad, Gos. nauchno-tekhn. izd-vo lit-ry, 1961. 573 p. (MIRA 14:8)
(Chemistry, Technical)

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; LEPILIN, V.N.

Fluidized bed. Izv. vys. ucheb. zav.; khim. i khim. tekh. 4 no. 2:298-302 '61. (MIRA 14:5)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta. Kafedra protsessov i apparatov.
(Fluidization)

29999

S/170/61/004/012/009/011
B104/B138

16.5500

AUTHORS: Shih Yen-fu, Romankov, P. G.

TITLE: Number of dimensionless complexes and simplexes obtained by the method of dimensional analysis

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 12, 1961, 102 - 105

TEXT: Dimensional analyses are a valuable means for setting up criterial equations describing a given phenomenon. The number of independent variables can thus be reduced, and the study concerned can be simplified on the basis of E. Buckingham's π-theorem (Phys. Rev., 4, 345, 1914). The correct formulation and the demonstration of the π-theorem have been studied by many scientists (Sedov L. I., Metody podobiya i razmernosti v mekhanike. Goskhimizdat, M., 1957; Eygenson L. S., Modelirovaniye. Gos. izd. "Sovetskaya nauka", M., 1952; Van Driest, J. Appl. Mech., 13, 1, 1946; Langhaar H. L. Dimensional Analysis and Theory of Models. New York-London, 1951). In the authors' opinion, the π-theorem was formulated most exactly and most completely by Sedov and Eygenson. A proof of this formulation of the π-theorem is presented in this paper. The authors

Card 1/2

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B104/B138

Number of dimensionless complexes and ...

proceed from Buckingham's formulation of the π-theorem to demonstrate the following version: An equation interrelating n physical quantities among which there are k quantities having independent dimensions, can be transformed into an equation that interrelates n-k dimensionless complexes and simplexes composed of n quantities. The number of dimensionless complexes is equal to the difference between the number, r, of quantities with unlike dimensions and the number, k, of quantities with independent dimensions. The number of dimensionless simplexes is equal to the difference between the total number, n, of quantities and the number, r, of quantities with unlike dimensions. As this formulation agrees with Eygenson's, the authors regard it as correct. There are 6 references: 3 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Buckingham E. Phys. Rev., 4, 345, 1914; Van Driest, J. Appl. Mech., 13, 1, 1946; Langhaar H. L. Dimensional Analysis and Theory of Models. New York-London, 1951.

ASSOCIATION: Tekhnologicheskiy institut im. Lensoveta, g. Leningrad (Technological Institute imeni Lensovet, Leningrad)

SUBMITTED: July 3, 1961

Card 2/2

ROMANKOV, P.G. (Leningrad)

Guiding principles of the development of scientific research in the field of chemical technological operations and apparatus. Kem tud kozl MTA 15 no.1:1-15 '61. (EEAI 10:6)

1. Lenszovjet Leningradi Technologiai Intezet, Leningrad, USSR. (Russia--Chemical industries)

PAVLUSHENKO, I.S.; SMIRNOV, N.N.; ROMANKOV, P.G.

Effect of stirring on the process of chemical conversion. Zhur. prikl. khim. 34 no.2:312-319 F '61. (MIRA 14:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Chemical reaction—Conditions and laws)

KONOVALOV, V.I.; SHTROBEL', V.O.; ROMANKOV, P.G.

Criterial equations of choking for countercurrent extraction columns. Zhur.prikl.khim. 34 no.9:1966-1971 S '61. (MIRA 14:9)

1. Kafedra protsessov i apparatov Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.
(Extraction apparatus)

KONOVALOV, V.I.; ROMANKOV, P.G.

Mass transfer and hydrodynamics in an inclined countercurrent vibrating extractor. Zhur.prikl.khim. 34 no.10:2217-2226 O '61. (MIRA 14:11)

1. Kafedra protsessov i apparatov Leningradskogo tekhnologicheskogo instituta imeni Lensoveta
(Extraction apparatus)

FROLOV, V.F.; ROMANKOV, P.G.

Granular material residence time in a fluid-bed reactor. Zhur.prikl. khim. 35 no.1:80-89 Ja '62. (MIRA 15:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Granular materials) (Fluidization)

SMIRNOV, N.N.; PAVLUSHENKO, I.S.; ROMANKOV, P.G.

Dependence of the reaction rate on the nature of interacting substances and on the degree of conversion during mechanical mixing. Zhur.prikl.khim. 35 no.1:90-95 Ja '62. (MIRA 15:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Mixing) (Chemical reaction, Rate of)

SHI YAN'-FU [Shih Yen-fu]; ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Drying process in a fluidized bed. Zhur.prikl.khim. 35 no.3: 530-536 Mr '62. (MIRA 15:4)
(Fluidization) (Drying)

ROMANKOV, P. G.; RASHKOVSKAYA, N. B.; GOLTSIKER, A. D.

"Some problems on the calculation and the intensification of thermal processes in a fluidized bed."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Lensoveta---Leningrad Technological Inst

ROMANKOV, P. G.; RASHKOVSKAYA, N. B.; FROLOV, V. F.

"Drying of loose and pasty materials and solutions in a fluidized bed."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Leningrad Technological Inst.

KOZLOV, T.I., prepod.; KULINICHKOVA, Ye.Ya., prepod.; KUROCHKINA, M.I., prepod.; LEPILIN, V.N.; MEDVEDEV, A.A.; MOSKOV, A.A. OVECHKIN, I.Ye.; PAVLUSHENKO, I.S.; PLYUSHKIN, S.A.; RASHKOVSKAYA, N.B.; ROMANKOV, P.G.; FROLOV, V.F.; YABLONSKIY, P.A.;

[Manual on practical work in the laboratory on the processes and apparatus of chemical technology] Rukovodstvo k prakticheskim zaniatiiam v laboratorii po protsessam i apparatam khimicheskoi tekhnologii. Izd.2., ispr. i dop. Moskva, Khimiia, 1964. 243 p. (MIRA 18:2)

SHAKHOV, Yu.A.; NOSKOVS, A.A.; ROMANKOV, P.G.

Upper boundary of a foaming state on sieve plates. Zhur. prikl. khim. 37 no.9:2074-2077 S '64.

(MIRA 17:10)

L 38581-65 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4 JD/RM

ACCESSION NR: AP5011045 UR/0080/64/037/010/2223/2228

34
B

AUTHOR: Kutsakova, V. Ye.; Romankov, P. G.; Rashkovskaya, N. B.

TITLE: Certain kinetic regularities of drying in a fluidized and turbulent bed

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 10, 1964, 2223-2228

TOPIC TAGS: chemical drying, chemical kinetics, polymer, chemical engineering

Abstract: A method of designing conical dryers which were successfully used in drying polydisperse materials (including polymers) is presented. In the calculation a kinetic equation was used which was obtained by generalizing experimental data on the drying of the styrene copolymers. The experiments showed that when polymers are dried in a fluidized bed the temperature of the vented air and the dried material are practically equal. Therefore the temperature of the air was assumed to be 70°. It can be concluded that conical equipment can have an efficiency equal to that of cylindrical equipment, or even higher. Orig. art. has 20 formulas and 1 table.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute)

Card 1/2

KUTSAKOVA, V.Ye.; ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Some kinetic correlations for the process of spray drying in a fluidized bed. Zhur. prikl. khim. 37 no.9:1972-1977 S '64. (MIRA 17:10)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

NIKOL'SKIY, B.P., glav. red.; GRIGOROV, O.N., doktor khim. nauk, red.; PORAY-KOSHITS, B.A., doktor khim. nauk, red.; POZIN, [redacted], red.; ROMANKOV, P.G., red.; FRIDRIKHSBERG, D.A., kand. khim. nauk, red.; RABINOVICH, V.A., kand. khim. nauk, red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; ZAYDEL', A.N., doktor fiz.-mat. nauk, red.; ZASLAVSKIY, A.I., kand.khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; GRIVA, Z.I., red.; KOTS, V.A., red.; TOMARCHENKO, S.L., red.

[Chemist's handbook] Spravochnik khimika. 2., izd., perer. i dop. Moskva, Khimiia. Vol.4. 1965. 919 p. (MIRA 19:1)

1. Chlen-korrespondent AN SSSR (for Nikol'skiy, Romankov).

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; COL'TSIKER, A.D.

Some problems of the calculation and intensification of thermal processes in a fluidized bed. Izv.vys.ucheb.zav.; khim. i khim.tekh. 8 no.2:320-326 '65. (MIRA 18:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra protsessov i apparatov.

BEGER, E.O.; ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Structural viscosity of paste-like materials. Zhur. prikl. khim. 37 no.6:1279-1284 Je '64.

(MIRA 18:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, P.G.

Design of equipment for new processes in chemical technology. Vest. AN SSSR 35 no.6:54-62 Je '65. (MIRA 18:8)

1. Chlen-korrespondent AN SSSR.

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Modern drying techniques and equipment in the chemical industry.
Zhur.VKHO 10 no.1:18-25 '65. (MIRA 18:3)

1. Chlen-korrespondent AN SSSR (for Romankov).

[illegible], A.V.; RASHKOVSKAYA, N.B.; [illegible]

Mechanism of the initial stage of fluidization in conical apparatus. Zhur.prikl. khim. 37 no. 5:1030-1035 My '64. (MIRA 17:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, Petr Grigor'yevich; RASHKOVSKAYA, Nataliya Borisovna; KUROCHKINA, M.I., red.

[Fluidized bed drying; theory, design and calculations] Sushka v kipiashchem sloe; teoriia, konstruktsii, raschet. Leningrad, Izd-vo "Khimiia," 1964. 287 p. (MIRA 17:8)

PAVLOV, K.F.; ROMANKOV, P.G.; NOSKOV, A.A.; KORNOCHKINA, M.I., red.; KOTS, V.A., red.

[Examples and problems for the course on the processes and apparatus of chemical technology] Primery i zadachi po kursu protsessov i apparatov khimicheskoi tekhnologii. Izd.6., perer. i dop. Moskva, Khimiia, 1964. 633 p. (MIRA 17:10)

1. Chlen-korrespondent AN SSSR (for Romankov).

FROLOV, V.F.; ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Drying of free-flowing materials in a multisectional apparatus with fluidized beds. Zhur. prikl. khim. 37 no. 4:824-831 Ap '64. (MIRA 17:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; SINEL'NIKOVA, L.L.

Drying of some polymeric materials in a fluidized bed with the air-lift method. Khim.prom. no.11:841-843 '63. (MIRA 17:4)

ROMANKOV, P. G.

"Research in the field of the material exchange processes of chemical technology."

report submitted for 10th Anniv Festivities, Leuna-Merseburg Tech Inst for Chemistry, Leuna-Merseburg, E. Germany, 2-7 Nov 64.

KUTSAKOVA, V.Yo.; ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Some kinetic regularities of the process of drying in a fluidized bed. Zhur. prikl. khim. 36 no.10:2217-2224 O '63. (MIRA 17:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, P.G.; RASHKOVSKAYA N.B.; GOL'TSIKER, A.D.; BABENKO, V.Ye.

Fluid-bed dryers for polymeric materials. Plast.massy no.12:41-46 '63. (MIRA 17:2)

SHTROBEL', V.; ROMANKOV, P.G.; KONOVALOV, V.I.; LYUTAYA, N.S.

Study of hydrodynamics without mass transfer and in the presence of mass transfer in a rotor-disk extractor. Zhur. prikl. khim. 36 no.12:2672-2680 D'63. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

SMIRNOV, N.N.; PAVLUSHENKO, I.S.; ROMANKOV, P.G.

Effect of some factors on the rate of the chemical reaction during mechanical mixing. Zhur. prikl. khim. 36 no.11:2419-2425 N '63. (MIRA 17:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ROMANKOV, P.G., prof., doktor tekhn. nauk

On P.D. Lebedev's monograph "Design of drying units."
Inzh.-fiz. zhur. 6 no.9:119-120 S '63. (MIRA 16:8)

SHTROBEL', V.; ROMANKOV, P.G.; KONOVALOV, V.I.; LYUTAYA, N.S.

Study of mass transfer in a rotor-disk extractor. Zhur.prikl.khim. 37 no.1:50-58 Ja '64. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

BOLOTNIKOV, F.S.; ROMANKOV, P.G.

Sutdy of mass transfer in an inclined vibrating extractor. Zhur.prikl. khim. 37 no.1:46-50 Ja '64. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ZYULKOVSKIY, Zdislav [Ziolkowski, Zdislaw]; PLISSA, A.V., inzh. [translator]; ROMANKOV, P.G., prof., red.; KUROCHKINA, M.I., red.; ERLIKH, Ye.Ya., tekhn. red.

[Liquid extraction in the chemical industry] Zhidkostnaia ekstraktsiia v khimicheskoi promyshlennosti. Leningrad, Goskhimizdat, 1963. 478 p. Translated from the Polish. (Extraction (Chemistry)) (MIRA 16:9)

ROMANKOV, P.G., prof., red.; KUROCHKINA, M.I., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Transactions of the All-Union Scientific and Technical Conference on Problems of the Theory and Practice of Liquid Extraction Processes] Trudy Vsesoiuznogo nauchno-tekhnicheskogo soveshchaniia po voprosam teorii i praktiki protsessov zhidkostnoi ekstraktsii, Leningrad, 1961. Leningrad, Gostoptekhizdat, 1963. 383 p. (MIRA 16:6)

1. Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po voprosam teorii i praktiki protsessov zhidkostnoy ekstraktsii, Leningrad, 1961.
(Extraction (Chemistry))--Congresses) (Mass transfer)

HOBLER, Tadeusz; PLISS, A.V.[translator]; ROMANKOV, P.G., red.

[Heat transfer and heat exchangers]Teploperedacha i teploobmenniki. Leningrad, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1961. 819 p. (MIRA 16:2)
(Thermodynamics) (Heat exchangers)

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.

Drying of pastelike materials and solutions in a fluidized bed. Khim.prom. no.11:836-838 N '62. (MIRA 16:2)
(Drying apparatus)
(Fluidization)

ROMANKOV, P.G., doktor tekhn.nauk; RASHKOVSKAYA, N.B., kand.tekhn.nauk; YABLONSKIY, P.A., kand.tekhn.nauk; BEREZOVSKAYA, Z.A., kand. tekhn.nauk

Drying of a pastelike copper-nickel catalyst in a fluidized bed. Masl.-zhir.prom. 28 no.7:10-13 Jl '62. (MIRA 15:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

(Nickel catalysts--Drying)
(Fluidization)

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; BABENKO, V.Ye.; GOL'TSIKER, A.D.

Drying apparatus for carrying out processes in a fluidized bed. Khim.prom. no.11:822-827 N '62. (MIRA 16:2)
(Drying apparatus)
(Fluidization)

S/862/62/002/000/017/029
A059/A126

AUTHOR: Romankov, P.G.

TITLE: General kinetic rules of mass transfer in solid-gas and solid-liquid systems

SOURCE: Teplo- i massoperenos. t. 2: Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniyakh. Ed. by A.V. Lykov and B.M. Smol'skiy. Minsk, Izd-vo AN BSSR, 1962. 142 - 147

TEXT: The kinetic curves of a number of mass-transfer processes including drying, adsorption, desorption, extraction, and others show two periods with the overall process being controlled, in the first period by the rate of external diffusion, and in the second period by the internal resistance to diffusion. Therefore,

$$\frac{d^2M}{dFd\tau} = \frac{\Delta f_{overall}}{R_{overall}}, \qquad (3)$$

where $\left(\frac{d^2M}{dFd\tau}\right)$ is the rate of mass transfer from one phase into another, $\Delta f_{overall}$ the motive force, and $R_{overall}$ the resistance. In the first period

Card 1/4

of constant speed, the functional dependence

$$Ki' = f(Re, Pr', C, \Gamma) \quad (4)$$

holds, where Ki' is the Kirpichev diffusion criterion equal in this case to the Nusselt diffusion criterion

$$\left(Nu' = \frac{\beta l}{D}\right),$$

which characterizes the external mass transfer at the interface; C is the simplex of concentration of the studied component in the external phase, and Γ the simplex of the geometric analog. The kinetic dependence for the second period of decreasing velocity is

$$E = \varphi(Ki', Fo', \Gamma), \quad (5)$$

where E is the simplex of concentration of the studied component in the solid phase, and Fo' the Fourier criterion, $Fo' = D^*\tau/d^2$ characterizing the internal kinetic properties of the system. Thus, for adsorption,

General kinetic rules of mass transfer in ....

$$Ki' = 5.5 \cdot 10^{-5} Re'^{0.5} (Pr')^{0.67} \times$$
$$\times \left(\frac{c_{br}}{c_0}\right)^{-0.88} \left(\frac{h_0}{d_A}\right)^{0.36} \left(\frac{d_3}{d_A}\right)^{0.07} \left(\frac{\delta_{A\Gamma}}{\delta_{БАУ}}\right)^{0.86}, \quad (6)$$

where c_0 and c_{br} are the initial and the breakthrough concentrations, respectively, of the studied component in the air, h_0 is the height of the initial sorbent layer, d_3 the diameter of the sorbent grains, d_A the diameter of the apparatus, $d_{A\Gamma}$ and $d_{БАУ}$ the simplex of the apparent weights of the activated carbons АГ and БАУ characterizing the porous structures of the sorbents. For the first period in the drying of granular solids in fluidized and solid beds, the experimentally found dependence is

$$Nu = 0.25\ Re\ (h/d)^{-1}, \quad (11)$$

where $h = G/S\ \gamma_T$, the height of the compact layer which is numerically equal to the weight of the layer, G devided by the layer section S, and the specific gravity γ_T of the solid particle, and d is the diameter of the solid particle. For the second period of drying,

Card 3/4

General kinetic rules of mass transfer in ....

$$\log E = \frac{u - u_e}{u_{cr} - u_e}, \qquad (12)$$

where E is the simplex of the free-water content of the material; u, u_{cr}, and u_e are the current, critical, and equilibrium moisture contents of the material, respectively. For overall drying in the boiling layer,

$$\frac{u_c - u_{cr}}{u_{cr} - u_e} = 2.3 \log E = 1.2 \, Re \left(\frac{h}{d}\right) \left(\frac{p_v}{p_a}\right)^{0.25} Ko^{-1} \frac{\lambda_m}{\lambda_T} Fo, \qquad (13)$$

where p_v and p_a are the partial pressures of vapor and air, respectively. The research work for the present lecture was prepared at the Kafedra protsessov i apparatov (Chair of Processes and Apparatus) of the Institute mentioned in the Association by N.B. Rashkovskaya, V.N. Lepilin, M.I. Kurochkina, E.S. Nemet, Pao Chih-ch"üan, A.A. Medvedev, and Shih Yen-fu under the guidance of the author. A.M. Fedorov, N.A. Shakhova, M.S. Sharlovskaya, M.V. Tovbin, and A.D. Grinberg are mentioned. There are 5 figures.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

FLOKK, V.; LEPILIN, V.N.; ROMANKOV, P.G.

Kinetics of the adsorption process in countercurrent column with a fluidized bed of adsorbent. Zhur.prikl.khim. 36 no.2:315-322 F '63. (MIRA 16:3)

(Adsorption) (Fluidization)

PLYUSHKIN, S.A., kand.tekhn.nauk; KUKALENKO, B.D., inzh.; ROMANKOV, P.G., doktor tekhn.nauk

Separator for suspensions difficult to filter. Khim.mashinostr. n .2: 1-2 Mr-Ap '63. (MIRA 16:4)
(Separators (Machines))

ROMANKOV, P.G., prof., red.; KUROCHKINA, M.I., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Processes of liquid extraction] Protsessy zhidkostnoi ekstraktsii; trudy. Pod red. P.G.Romanova. Leningrad, Gostoptekhizdat, 1963. 383 p. (MIRA 16:7)

1. Vsesoyuznoye naucnno-tekhnicheskoye soveshchaniye po voprosam teorii i praktiki protsessov zhidkostnoi ekstraktsii, Leningrad, 1961.

(Extraction (Chemistry))

FLOKK, V.; LEPILIN, V.N.; ROMANKOV, P.G.

Kinetics of the adsorption process in a countercurrent column with a fluid-adsorbent bed. Zhur.prikl.khim. 35 no.10:2241-2246 O '62. (MIRA 15:12)

(Adsorption) (Fluidization)

FROLOV, V.F.; ROMANKOV, P.G.

Distribution of granular material according to the time of stay in apparatus with a fluidized bed. Zhur.prikl.khim. 35 no.10: 2220-2224 O '62. (MIRA 15:12)
(Granular materials) (Fluidization)

ROMANKOV, P.G.; RASHKOVSKAYA, N.B.; BEREZOVSKAYA, Z.A.; YABLONSKIY, P.A.

Drying some pastelike pigments in a fluidized bed. Lakokras. mat. i ikh prim. no.6:61-64 '61. (MIRA 15:3)

1. Leningradskiy tekhnologicheskiy institut imeni Leningradskogo Soveta.

(Pigments) (Drying apparatus)

FROLOV, V.F.; ROMANKOV, P.G.

Transitional conditions of processes taking place in a fluidized bed. Zhur.prikl.khim. 35 no.7:1526-1533 Jl '62. (MIRA 15:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Fluidization)

ROMANKOV, P.G.

Drying pulpy substances. Elelm ipar 14 no.8/9:269-274 Ag-S '60.

1. Leningradi Technologiai Intezet, a Lenszovjetrol elnevezve.

ROMAN'KOV, Yu.

Catcher of the "thunder matter." Nauka i zhizn' 28 no.12:48 D '61. (MIRA 15:2)
(Rikhman, Georg Vil'gel'm, 1711-1753)

ROMAN'KOV, Yu., nauchnyy sotrudnik

Our great contemporary. Tekh.mol. 29 no.11:7 '61. (MIRA 14:11)

1. Institut fizicheskoy khimii AN SSSR.
(Lomonosov, Mikhail Vasil'evich, 1711-1765)

S/076/60/034/008/027/039/XX
B015/B063

AUTHORS: Figurovskiy, N. A., Komarova, T. A., and Roman'kov, Yu. I.

TITLE: Effect of Temperature on the Crystallization of Calcium Salts From Solutions

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8, pp. 1826 - 1832

TEXT: As the precipitation of easily filterable substances is of great importance for practical analysis, the effect of various factors upon crystallization is frequently studied. The authors have now studied the effect of temperature upon the rate of crystallization of $KClO_3$, $KBrO_3$, KIO_3, KNO_3, K_2SO_4, and KCl. The supersaturated solutions were prepared by V. M. Fisher's method (Ref.7), and crystallization was studied in a thermostat between 0° and 40°C. The maximum rate of crystallization v was graphically determined from the kinetic curves. In all salts it was found that v increases with temperature and with the supersaturation of the solutions, but is not always greater for those potassium salts which have

a better solubility. The increase in v is attributed to an increase in the interaction among ions with an increase in concentration and a decrease of the interaction among water molecules and between salt ions and water molecules. At 0°C, e.g., $KBrO_3$ and $KClO_3$ have a similar solubility, while the corresponding values for v differ largely. KCl and KNO_3 have the highest values of v. K_2SO_4 occupies a special position since v is practically independent of the supersaturation at 0°C. Besides, v increases only slightly at a certain relative value of supersaturation between 0° and 40°C, whereas it increases considerably in this range at two other relative values of supersaturation. The salts may be divided into three groups: K_2SO_4 and KCl exhibit the greatest change of v between 0° and 20°C; $KClO_3$ and $KBrO_3$ show a linear increase of v with temperature; and KNO_3 and KIO_3 show a great increase of v between 20° and 40°C. The temperature gradient k of crystallization which is given as $1/v_i \cdot v_{i+1} - v_i/(T_i + 10) - T_i$ (1) (v_i and v_{i+1} = maximum crystallization

rates at T_i and T_i + 10, respectively), drops with a rise of temperature and increases with supersaturation (cf. Table 2). Between 0° and 20°C, the drop is more distinct than between 20° and 40°C. With a rise of temperature, the effect of the type of anion on k is lowered the more the smaller is supersaturation. There are 6 figures, 2 tables, and 22 references: 15 Soviet, 4 Indian, 2 US, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: November 27, 1958

S/076/60/034/008/027/039/XX
BQ15/B063

Таблица 2

Изменение температурного градиента скоростей кристаллизации солей при различных пересыщениях

t, °C	1 Температурный градиент k [по формуле (1)] в обратных градусах			t, °C	1 Температурный градиент k [по формуле (1)] в обратных градусах		
	2 относительное пересыщение				2 относительное пересыщение		
	$x_0 = 0{,}05$	$x_0 = 0{,}10$	$x_0 = 0{,}15$		$x_0 = 0{,}05$	$x_0 = 0{,}10$	$x_0 = 0{,}15$
	$KClO_3$				KNO_3		
10—0	0,041	0,060	0,062	10—0	0,047	0,052	0,059
20—10	0,029	0,039	0,040	20—10	0,048	0,036	0,041
30—20	0,022	0,027	0,028	30—20	0,042	0,032	0,040
40—30	0,018	0,021	0,021	40—30	0,030	0,033	0,035
	$KBrO_3$				K_2SO_4		
10—0	0,094	0,108	0,100	10—0	0,0084	0,070	0,150
20—10	0,048	0,051	0,062	20—10	0,0079	0,038	0,032
30—20	0,031	0,034	0,039	30—20	0,0072	0,020	0,018
40—30	0,024	0,025	0,028	40—30	0,0067	0,011	0,011

Card 4/5

KJO_3				KCl			
10—0	0,046	0,038	0,016	10—0	0,068	0,025	0,035
20—10	0,030	0,056	0,033	20—10	0,021	0,010	—
30—20	0,024	0,057	0,052				
40—30	0,019	0,044	0,052				

Text to Table 2: Variation of the Temperature Gradient of the Crystallization Rate of Salts With Varying Supersaturation; 1 - Temperature gradient k (expressed in reciprocal temperature values according to formula (1)); 2 - Relative supersaturation ($x_o = c_x - c_o/c_o$, where c_x and c_o denote salt concentration and solubility, respectively, at the given temperature)

Card 5/5

ROMANKOVA, A. G.

A. G. Romankova, "Concerning the Parasitism of Mold Fungus Penicillium rugolosum Thom. on Aspergillus niger," Comptes Rendus (Doklady de l'Academie des Sciences do l'URSS, vol.1, no. 3, 193[illegible], pp. 137-138. 511 P44

SO: Sira Si 90-53, 15 Dec 1953

ROMANKOVA, A. G.

PA 70T52

USSR/Medicine - Fungi Mar/Apr 1948
Medicine - Penicillin

"Antagonism Between Mold Fungi," A. G. Romankova, Sci Res Lab, Citric Acid Works, Leningrad, 9½ pp

"Mikrobiol" Vol XVII, No 2

Mold fungi, accompanied by growth and acid formation of Asp. niger in nonsterile conditions, are represented by Penicillium- and Aspergillus-type molds. Pen. rugulosum are antagonistic to Asp. niger. This is especially true when the former contain solutions of 15% citric acid. Gives other conclusions based on data obtained. Submitted 7 Aug 1946.

[redacted] 70T52

ROMANKOVA, A.G.

Microflora of podzolic soils in different geographical regions of the U.S.S.R. Vest.Len. un. 9 no.1:37-42 Ja '54. (MLRA 9:7)
(Podzol) (Fungi)

ROMANKOVA, A.G.

Occurence of fungi of the genus Penicillium in chernozem and chestnut soils. Vest.Len.un.9 no.1:43-47 Ja '54. (MLRA 9:7)
(Penicillium)

ROMANKOVA, A.G.

Decomposition of fat by fungi of the genus Penicillium. Vest. Len. un. 9 no.4:59-64 Ap '54. (MLRA 8:6)
(Penicillium) (Fat)

SHISHKIN,B.K., professor; ROMANKOVA,A.G., kandidat biologicheskikh nauk, starshiy nauchnyysotrudnik; MARKOV,G.S., doktor biologicheskikh nauk, dotsent; DANILEVSKIY,A.S., kandidat biologicheskikh nauk, dotsent; SHTEYNBERG,D.M., doktor biologicheskikh nauk; LOMAGIN,A.G aspirant; SELL'-BEKMAN,I.Y., mladshiy nauchnyy sotrudnik; ZHINKIN, L.N., doktor biologicheskikh nauk, professor; IPATOV,V.S., student V kursa; KOZLOV,V.Ye., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; KARTASHEV,A.I., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; NITSENKO,A.A., starshiy nauchnyy sotrudnik; VASILEVSKAYA,V.K., doktor biologicheskikh nauk, dotsent; RYUMIN,A.V., kandidat biologicheskikh nauk; NAUMOV.D.V., kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY,L.I. kandidat biologicheskikh nauk, dotsent; GOROHETS,A.M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GODLEVSKIY,V.S. assistent; GERBIL'SKIY,N.L., doktor biologicheskikh nauk, professor; ALEKSANDROV,A.D., professor; KOLODYAZHNYY,V.I.; TURBIN,N.V.; ZAVADSKIY,K.M.

[Theory of species and the formation of species]. Vest.Len.un. 9 no.10:43-92 O '54. (MLRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Condtinued on next card)

SHISHKIN.B.K., professor; ROMANKOVA,A.G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik, and others.

[Theory of species and the formation of species]. Vest.Len.un. 9 no.10:43-92 O '54. (MLRA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova, Markov, Ipatov, Kozlov, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov) 3. Zoologicheskiy institut Akademii nauk SSSR (for Shteynberg, Naumov) 4. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta (for Danilevskiy). 5. Kafedra darvinizma Leningradskogo gosudarstvennogo universitete (for Lomagin, Gorobets). 6. Kafedra geobotaniki Leningradskogo gosudarstvennogo universiteta (for Nitsenko). 7. Kafedra botaniki Leningradskogo gosudarstvennogo universiteta (for Vasilevskaya). 8. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstbennogo universiteta (for Khozatskiy). 9. Leningradskoye otdeleniye Vsesoyuznogo instituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman) 10. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Zhinkin)

(Origin of species)

ROMANKOVA, A. G.; KOBRINA, Yu. P.

Antagonistic properties of Penicillium from various systematic groups. Mikrobiologiia 24 no.1:73-74 Ja-F '55. (MLRA 8:4)

1. Biologicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanov.
(PENICILLIUM, antagonists)

ROMANKOVA, A.G.

Appraisal of natural substrata as media for the development of various groups of the genus Penicillium. Uch.zap.Len.un.no.191: 87-95 '55. (Penicillium) (MLRA 9:7)

ROMANKOVA A.G.

Breeding fungi of the genus Penicillium for cheese production.
Uch.zap.Len.un.no.191:96-104 '55. (MIRA 9:7)
(Cheese) (Penicillium)

ROMANKOVA, A.G.

Biological principles in studying the phylogeny of fungi. Vest. Len. un. 11 no.3:3-12 F '56. (MLRA 9:7)
(Phylogeny (Botany)) (Penicillium)

ROMANKOVA, A.G.; MATTISON, N.L.; SOKOL'SKAYA, A.P.

Proteolytic properties of Penicillium species. Vest. Len. un. 11 no.15:136-138 '56. (MLRA 9:10)

(PENICILLIUM) (PROTEINS) (CHEESE--BACTERIOLOGY)