"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

DOROZHKIN, M.A. [Doroshkin, M.A.]; akademik; CHEKALINSKAYA, N.I. [Chekalinskaia, N.I.]

Most harmful and widespread diseases of lupine in the White Russian S.S.R. Vestsi AN BSSR. Ser.biial.nav. no.1:54-59 '60. (MIRA 13:6)

1. Akademiya sel'skokhozyaystvennykh nauk BSSR (for Doroshkin).
(WHITE RUSSIA--LUPINE--DISEASES AND PESTS)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

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DOROZHKIN, N.A.; CHEKALINSKAYA, N.I.

Development of the rust Uromyces lupinicola Bubak. on various lupine species (Lupinus luteus L., L.angustifolius L., L.polyphyllus Lindl.). Dokl.AN BSSR 4 no.4:179-180 Ap '60. (MIRA 13:10)

1. Institut zemledeliya Akademii sel'skokhozyaystvennykh nauk BSSR.
(Rusts (Fungi)) (Lupine--Diseases and pests)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, N. I.

Cand Biol Sci - (diss) "Diseases of lupine in the Belorussian SSR." Minsk, 1961. 19 pp; (Inst of Biology Academy of Sciences Belorussian SSR); 220 copies; price not given; (KL, 10-61 sup, 211)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

NESTEROVICH, N.D., akademik; IVANOV, A.F.; IVANOVA, Ye.V.; MARGAYLIK, G.I.; PONOMAREVA, A.V.; SIROTKINA, R.G.; SMIRNOVA, V.A.; SMOL'SKAYA, Ye. N.; CHEKALINSKAYA, N.I.; BULAT, O., red. izd-va; SIDERKO, N., tekhn. red.

[Trees and shrubbery introduced to the White Russian S.S.R.] Introdutsirovannye derev'ia i kustarniki v Belorusskoi SSR. Minsk. No.3. [Introduced woody plants of Siberia, Europe, the Mediterranean, the Crimea, the Caucasus, and Central Asia] Introdutsirovannye drevesnye rasteniia flory Sibiri, Evropy, Sredizemnomor'ia, Kryma, Kavkaza i Srednei Azii. 1961. 333 p. (MIRA 14:6)

1. Akademiya nauk BSSR, Minsk. Institut biologii. 2. Akademiya nauk BSSR (for Nesterovich)
(White Russia--Plant introduction)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, N.I.

Stemphylium infection of lupine in the White Russian S.S.R.
Sbor. nauch. rab. Bel. otd. VBO no.3:231-235 '61. (MIRA 14:12)
(White Russia--Fungi, Phytopathogenic)
(Lupine--Diseases and pests)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

YURKEVICH, I.D.; CHEKALINSKAYA, N.I. [Chakalinskaia, N.I.]

Nikolai Dmitrievich Nesterovich, 1903 - ; on his 60th birthday. Vestsi AN BSSR, Ser. biial. nav. no.3:130-136 '63 (MIRA 17:7)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, N.I.

Diseases of fodder beans. Bot.; issl. Bel. otd. VBO no.5; 210-216 '63. (MIRA 17:5)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, Yu. I.

16(1); 24(4,5) PHASE I BOOK EXPLOITATION SOV/1899

Akademiya nauk Belorusskoy SSR. Institut fiziki i matematiki

Trudy, vyp. 2. (Transactions of the Institute of Physics and Mathematics, Belorussian SSSR Academy of Sciences, Nr 2) Minsk, 1957. 283 p. Errata slip inserted. 750 copies printed.

Ed.: B. I. Stepanov, Academician, BSSR Academy of Sciences; Ed. of Publishing House: L. Marike; Tech. Ed.: I. Velekhanovich.

PURPOSE: This book is intended for mathematicians, physicists, and graduate students in mathematics and physics.

COVERAGE: This book contains a series of articles on recent contributions by members of the Institut fiziki i matematiki (Institute of Physics and Mathematics) of the Academy of Sciences, BSSR, in the fields of radiation, luminescence, optics, and spectroscopy and on the applications to physics of analysis, tensor analysis, linear groups, theory of adjustments, and differential equations. The

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first article contains a brief account of the work of the Institute, including names of scientists and mathematicians connected with it, facilities, scientific accomplishments, and fields of interest.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

Chekalinskaya, Yu. I.

48-11-4/13

AUTHOR: Chekalinskaya, Yu. I.

TITLE: On the Degree of Light-Dispersion (O kratnosti rasseyaniya sveta).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 11, pp. 1494-1499 (USSR).

ABSTRACT: Equations were derived for the intensity of light with different degrees of dispersion and by considering the absorption by the medium. Moreover the relative part of reflected light in dependence on the coefficient of absorption was examined and the intensity of the light dispersed in forward direction in various depths was treated in this report. It is shown: 1) That the intensity of the reflected light depends apparently on the coefficient of absorption. 2) That in the case of an enlargement of the absorption the absolute intensity of the reflected light of various degree of dispersion decreases unequally. The higher the degree, the more rapidly the intensity decreases. 3) The intensity of the light of various degree of dispersion which disperses in direction of the inciding current first increases in an infinitely thick layer with the enlargement of the optic depth, attains its maximum value for subsequently decreasing. 4) The greater the depth of the light-dispersing layer is, the greater is the part of the light dispersed

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in forward direction on the dispersion of higher order. 5) The formula of flow for any degree of dispersion in that case where the medium does not reflect, is simplified. 6) A formula is derived for the coefficient of reflection of a layer of infinite thickness for that case in which the variation of the degree with the dispersion in forward direction should be neglected and in which case only the passed through and reflected light should be differentiated. 7) A formula is derivated for that case in which only the dispersion of the two first orders will be taken into consideration with the reflected light and where it is assumed that the dyed medium is dispersed in exactly the same way as the undyed one.

There are 2 figures, and 21 references, 17 of which are Slavic.

ASSOCIATION: Institute of Physics and Mathematics AN Belorussian SSR (Institut fiziki i matematiki Akademii nauk BSSR).

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CHEKALINSKAYA, Yu.I.

Luminescence of powdered objects. Izv.AN SSSR.Ser.fiz. 22 no.11:1395-1398 N '58. (MIRA 11:12)

1. Institut fiziki i matematiki AN BSSR.
(Luminescent substances)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, Yu. I.

24(7),24(8)

AUTHOR: Stepanov, B. I., Academician AS Belorusskaya SSR SOV/30-59-1-9/57

TITLE: Investigations by Belorussian Scientists in the Field of Spectroscopy and Luminescence (Rabety belorusskikh uchenykh po spektroskopii i lyuminestsentsii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 68-76 (USSR)

ABSTRACT: These investigations are being carried out at the Institut fiziki i matematiki (Institute of Physics and Mathematics) and the fizicheskiy fakul'tet Belorusskogo universiteta (Physics Department, Belorussian University) under the direction of B. I. Stepanov, A. N. Sevchenko, M. A. Yel'yashevich, Academicians AS BSSR, and F. I. Federov, Corresponding Member, Academy of Sciences, BSSR. In the field of theoretical spectroscopy, the investigations by P. A. Apanasevich, B. I. Stepanov are mentioned. Further, the following investigations are indicated:

B. I. Stepanov, Ya. S. Khvashchevskaya used the general principles of spectroscopy of negative currents in their examinations.

On the basis of experimental data A. N. Samson obtained important results in the determination of genuine values of optical characteristics of the substance examined.

L. A. Kravtsov, N. P. Ivanov examined calculation methods of reabsorption with large overlapping of absorption and luminescence spectra.

N. A. Borisevich succeeded in obtaining fundamental results in the examination of luminescence of phthalimide vapors. He also showed that the efficiency of quenching collisions may be much less than one.

L. S. Bikulik, under the direction of A. N. Sevchenko, examines the influence of the solvent on the yield of fluorescence as well as the absorption and emission spectra.

Card 2/8

A. N. Sevchenko, G. P. Gurinovich, A. M. Sarzhevskiy examined the luminescence polarization of many combined molecules. At the same time they designed an improved apparatus.

A. N. Sevchenko, V. V. Knznetsova work in the field of luminescence of rare-earths complexes.

V. A. Filipovich examined the phenomenon of phosphorescence. The examinations of optical properties of chlorophyll and related compounds are being carried out in close cooperation with the Institut biologii Akademii nauk BSSR (Institute of Biology, Academy of Sciences, Belorusskaya SSR).

T. N. Godnev, L. A. Kravtsov, R. V. Yefremova examined the absorption and luminescence spectra of a live leaf.

A. N. Sevchenko, G. P. Gurinovich, K. N. Solov'yev, L. A. Kravtsov examined polarization spectra and the dependence of polarization on the wave length of fluorescence.

A. N. Sevchenko, L. V. Volod'ko obtained valuable data of the composition of complex compounds and the nature of intermolecular forces of interaction.

I. P. Shapiro examined the optical and electrical properties of some crystal phosphors.

Card 3/8

A. N. Sevchenko, B. I. Stepanov examined cellulose and its products of transformation.

R. G. Zhbankov, I. N. Yermolenko worked at high pressure in order to study the composition of celluloses by means of spectroscopical methods.

I. N. Yermolenko, R. G. Zhbankov examined the oxidizing kinetics of cellulose by means of nitrogen dioxide, iodic acid and chloride.

R. G. Zhbankov, B. I. Stepanov, A. Ya. Rozenberg, A. I. Skrygan, A. M. Shishko examined the mercerizing process of cellulose.

M. M. Pavlyuchenko, I. N. Yermolenko examined the oxidation of celluloses with the use of absorption spectroscopy in the ultraviolet range.

M. M. Pavlyuchenko and collaborators spectrophotometrically examined the adsorption of coloring substances on cellulose.

I. N. Yermolenko, M. Z. Gavrilov examined the luminescence of cellulose products.

B. I. Stepanov, Yu. I. Chekalinskaya determined the dependence of the spectra of dispersed objects on the reduction ratio, the character of the binding agent, and the layer thickness.

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B012/B054 82230

24.3900

AUTHOR: Chekalinskaya, Yu. I.

TITLE: Propagation of Radiation Within a Powdery Layer

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 7, pp. 43 - 50

TEXT: The author investigates the dependence of the radiant flux within a powdery layer and the radiation amount dependent on the individual elementary layers upon the layer parameters (product of the absorption coefficient and the particle dimensions; reflection degree at the boundary of the particle; layer depth). The dependence of the reflection degree and the passage coefficient of a powdery layer on its parameters was investigated in the author's paper (Ref. 1). Here, she does not consider the self-luminosity of the layer due to photochemical reactions and luminescent objects, nor the heat radiation caused by the heating of dispersed media due to absorption of the incident radiation. First she investigates the radiant flux within the layer, i.e. within a horizontal light-dispersing layer. Due to multiple reflection, there

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are two radiant fluxes at any depth of layer: $F_N^{(1)}(m)$ and $F_N^{(2)}(m)$. The former propagates downward in the direction of incident radiation whereas the latter propagates upward opposite to the former. Formulas (2) and (3) are derived. They express the dependence of radiant fluxes within a powdery layer on the particle dimensions l, the absorption coefficient k, the reflection degree r_0 at the particle boundary, the depth and density of the layer. It is pointed out that formulas for radiant fluxes within a dispersing layer were obtained by A. A. Gershun (Ref. 7), and by P. Kubelka and F. Munk (Ref. 8). In deriving them it had been assumed that with sufficiently thin light-dispersing layers there is a linear dependence between reflection degrees and permeability on the one hand, and layer thickness on the other. In the present paper, the author did not make such assumption; formulas (2) and (3) are valid for objects of any absorption coefficient and scattering factor. Now, some special cases are investigated: 1) Nonabsorbent, dispersing medium. It is shown that with sufficiently thick layers at not very great depths $F_N^{(1)} \simeq F_N^{(2)} \simeq F_0$, and that $F_N^{(2)}(m)$ does not depend on the reflection degree at the particle boundary. 2) Infinitely thick,

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absorbent dispersing layer. It is shown that the parameter b characterizes the radiation fraction let through by an elementary layer of the dispersing medium in the direction of the incident flux. 3) Poorly dispersing, strongly absorbent medium. It is shown that the radiant flux decreases according to an exponential law. On the basis of the formulas derived and the table given for the R_∞ (reflection degree)- and b-values, the light conditions within the powdery layer can be studied in dependence on internal parameters. Fig. 1 shows these relations for the special case of an infinitely thick layer, Fig. 2 for the special case of a finitely thick layer in diagram form. Finally, the author investigates the absorption of radiation within the powdery layer. She derives formulas (9) and (10) for the radiation amount absorbed by the individual elementary layers, and formula (11) for the radiation amount absorbed in the case of an infinitely thick layer. On the basis of these formulas and the table mentioned for b- and R_∞-values it is possible to study the dependence of the absorbed radiation fraction on the layer parameters. B. I. Stepanov, Academician of the AS BSSR, advised the author. There are 3 figures, 1 table, and 8 references: 5 Soviet, 1 Hungarian, 1 German, and 1 British.

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Propagation of Radiation Within a Powdery Layer S/170/60/003/07/04/011
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ASSOCIATION: Institut fiziki AN BSSR, g. Minsk (Institute of Physics of the AS BSSR, Minsk)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

STEPANOV, B. I., SAMSON, A. M. and CHEKALINSKAYA, Yu. I.

"The effect of noises on the oscillation of a bounded plane-parallel layer."

The light field inside and outside the resonator in the presence of noises discussed.

The report presented at the 11th Conference on Luminescence (Molecular luminescence and luminescence analysis) Minsk, 10-15 Sept. 1962.

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STEPANOV, B. I. [Stsiapanau, B. I.]; CHEKALINSKAYA, Yu. I. [Chakalinskaia, IU. I.]

Effect of coatings on the radiation intensity of a plane-parallel layer under conditions of generation. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.1:46-51 '63. (MIRA 16:4)

(Metallic films) (Radiation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA, YU. I.

AID Nr. 997-4 25 June

INFLUENCE OF NOISE ON GENERATION OF A BOUNDED PLANE-PARALLEL LAYER (USSR)

Stepanov, B. I., A. M. Samson, and Yu. I. Chekalinskaya. IN: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 4, Apr 1963, 488-491.
S/048/63/027/004/006/026

The effect of noise on the spectral width and angular distribution of radiation generated by a bounded plane-parallel layer has been studied. The noise arises as a result of amplification of external radiation, including spontaneous emission. It is shown that spectral broadening resulting from noise is negligibly small, and that angular distribution changes due to noise depend on the parameters of the layer. In the specific case of a cylinder with plane-parallel ends and nonreflecting side walls, the broadening of the output beam angle because of noise is negligibly small. [BB]

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L 4494-66 EWA(k)/FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) IJP(c) WG

ACC NR: AP5026318 SOURCE CODE: UR/0368/65/003/004/0325/0335

AUTHOR: Stepanov, B. I.; Chekalinskaya, Yu. I.

ORG: none

TITLE: Fluorescence of two generating rods arranged in series

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 4, 1965, 325-335

TOPIC TAGS: multiple element laser, composite laser, laser

ABSTRACT: The performance of a multiple-element laser is analytically investigated by the use of a model comprised of two rods connected at two of their reflecting end plates and thus forming a complex intermediate layer. It is shown that the losses of such a double system depend not only on the parameters of the resonator, but also on the initial amplification factor. If the length of the two rods is equal, and the pumping intensity and the reflection coefficients of the external faces are the same for both components, then the composite generator is similar to a single continuous rod. However, if the above enumerated parameters are not equal for the components of the multiple-element laser, then the presence of the intermediate layer will manifest itself by a drop of the generation threshold of the system. Orig. art. has: 26 formulas and 5 figures. [ZL]

SUB CODE: EC,OP/ SUBM DATE: 17May65/ ORIG REF: 007/ OTH REF: 007/ ATD PRESS: 4130

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L 4962-66 EWA(k)/FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c) WG

ACC NR: AP5027352 SOURCE CODE: UR/0250/65/009/010/0659/0663

AUTHOR: Chekalinskaya, Yu. I.; Chechenina, Ye. P.

ORG: Physics Institute, AN BSSR (Institut fiziki AN BSSR)

TITLE: Amplification of a flux in an inhomogeneous layer when nonlinearity is taken into account

SOURCE: AN BSSR. Doklady, v. 9, no. 10, 1965, 659-663

TOPIC TAGS: laser, solid state laser, laser optics, light reflection, light reflection coefficient, light transmission, solid state amplifier

ABSTRACT: The properties of an amplifying inhomogeneous plane-parallel layer with arbitrary reflection coefficients on the end faces were investigated. Harmful losses in the active substance were taken into account, and the dependence of the amplification coefficient on the radiation density was considered in the calculations. It was shown that the use of an active layer with the reflection coefficients r_1 and r_2 on the end faces as an amplifier is limited by the oscillation threshold. The condition $X < 1/\sqrt{r_1 r_2}$ must be fulfilled if the system is to operate in the amplification mode (X is the single pass gain). The maximum possible value for X for extremely small fluxes ($\alpha S_0 \to 0$) is $X_{lim} = e^{(k_0-\rho)\ell}$ (k_0 is the initial gain of the active substance, ρ is the loss coefficient inside the active layer, and ℓ is the thickness of the layer). Because of nonlinear effects, there is a limiting flux $S_0 = S_0^*$ (S_0 is

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ACC NR: AP5027352

a perpendicularly incident flux on the layer surface) at which $X = 1$. When $S_0 < S_0^*$, the incident flux is amplified; when $S_0 > S_0^*$, it is attenuated, i.e., part of the incident flux is lost inside the layer. The limiting value for flux at which the amplification changes into attenuation does not depend on the length of the amplifying layer. The value of X obtained at very large incident fluxes ($\alpha S_0 \to \infty$) is equal to $e^{-\rho\ell}$. In this case the coefficient of external losses $\ln X/\ell$ is negative and equals $-\rho$, i.e., the incident flux is attenuated by losses. To investigate the effect of the layer parameters (k_0, ρ, ℓ, r_1, r_2), calculations were performed for the output emission, gain, and the yield of useful energy by a volume unit of the amplifying layer at incident radiation smaller that the limiting radiation. Due to the nonlinear effects, gains η and η_T ($\eta = \eta_T + \eta_R$) (where η_T and η_R are transmission and reflection gains, respectively) essentially depend on the magnitude of the incident flux S_0. Even small incident fluxes cause a decrease in η and η_T in comparison with the maximum possible gains η^0 and η_T^0. When S_0 decreases, η and η_T increase (the closer k_0 is to k_0^{thresh}, the greater the increase). At large light fluxes, i.e., ten to a hundred times smaller than the limiting one, total gains are close to unity and are independent of k_0. The dependence of η and η_T on the reflection coefficient r_1 of the input end-face of the amplifying layer for $r_1 r_2$ = constant shows that η_T reaches a maximum in the region where r_1 is approximately equal to r_2. When r_1 increases, η and η_R decrease to a value equal to r_1. Orig. art. has: 11 formulas, 2 figures, and 2 tables. [JA]

SUB CODE: OP/ec/SUBM DATE: 07Jul65/ ORIG REF: 009/ OTH REF: 001/ ATD PRESS: 4131

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

L 10477-67

ACC NR: AP6024333 SOURCE CODE: UR/0428/66/000/001/0082/0090

39

AUTHORS: Stepanov, B. I.; Chekalinskaya, Yu. I.

ORG: none

TITLE: The generation of a composite system from several parallel distributed rods

SOURCE: AN BSSR. Vestsi. Seryya fizika-matematychnykh navuk, no. 1, 1966, 82-90

TOPIC TAGS: nuclear reactor power, nuclear power, nuclear power plant, power plant

ABSTRACT: This article deals with the study of the radiance of several substances situated in parallel. Calculations are performed on the basis of energetics considerations in a nonlinear approximation. In parallel linkage the presence of contact permits a coherence of radiation because of mutual penetration of streams. The authors base their mathematical approach first on the general case of an arbitrary link and varying length of bars, and then on the consideration of two special cases where all rods are alike. The composite generator is schematically shown in Fig. 1. It consists of n active rods mutually joined by some link. Variables are defined as: v_j - the reflection coefficient on unjoined faces; R_j - the fraction of radiation returning to the j-th bar after reflection in the system, including reflection from the joined face; Δ_{ij} is the fraction of radiation emanating from the ith rod to the jth as the result of the linkage; S_j is the current at the left boundary of the jth

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L 10477-67

ACC NR: AP6024333

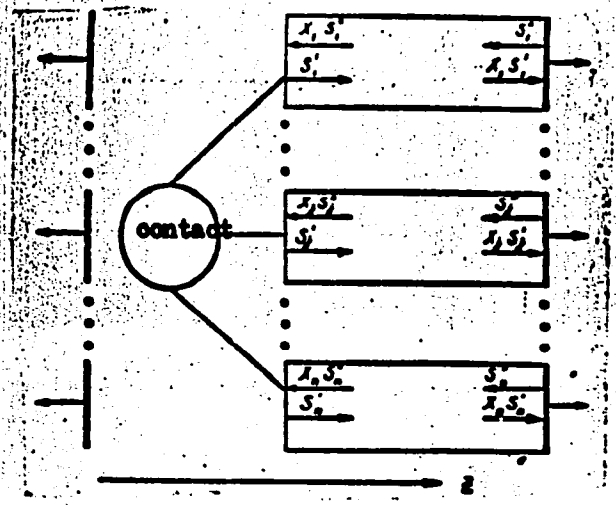

Fig. 1. Diagram of a composite generator

active layer, directed along the z-axis; S_j is the current at the right boundary, directed inward. X_j, the current amplification coefficient in the jth active layer, is given by

$$X_j = e^{\int_0^{l_j} [h_j(z) - \gamma_j(z)]\,dz}$$

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where ℓ_j is the length of the jth active layer, and $k_j(z)$ and $\rho_j(z)$ are respectively the amplification coefficient and the loss coefficient of the active substance. A system of n linear homogeneous equations in S'_j and S''_j are given in matrix form. The authors present a method for finding the complete system current in terms of an effective loss coefficient. From this analysis a means for determining optimum system configuration is described. Orig. art. has: 20 equations and 4 figures.

SUB CODE: 18/ SUBM DATE: 09Dec65/ ORIG REF: 004

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALINSKAYA-GOL'BERG, Yu. I. Cand Phys-Math Sci -- (diss) "Optical properties of absorbent diffusing media." Minsk, 1958. 11 pp (Acad Sci Belorussian SSR. Inst of Physics and Mathematics), 150 copies. (KL, 36-58,110)

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75584
SOV/130-59-10-16/20

AUTHORS: Chekalkin, M. (Foreman), Sergushin, A. (Steelmaker)

TITLE: Saving of Ferroalloys in Work With an Alloying Element Content of Below Average Level

PERIODICAL: Metallurg, 1959, Nr 10, pp 30-31 (USSR)

ABSTRACT: Following the tasks set by the Seven Year Plan to step up production of special-purpose steel, a team of young workers (Morozov, N., Dubov, S., Gureyev, P., Ushakov, V., Shershavkin, N., Glazkov, S. and the authors) developed a satisfactory method of working with a decreased content of tungsten, vanadium, molybdenum, and other elements in high-speed R18- and R9-steels. High-melting components of the charge (including ferrotungsten settled in the furnace hearth) were thoroughly and rapidly molten by intensive boiling of the bath at elevated temperatures. Sequence of operations: (1) maximum transformer power is used for melting and oxygen blown through the hot metal within 60 to 80 min after charging; (2) deoxidizers

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Saving of Ferroalloys in Work With an Alloying Element Content of Below Average Level

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SOV/130-59-10-16/20

are introduced into bath; (3) bath is stirred as slag gets lighter (within 20 to 25 min); (4) ferrotungsten and ferrovanadium are added 40 to 50, and 30 to 40 min, respectively, before tapping into thoroughly deoxidized metal; (5) repeated stirring of bath; (6) tapping after metal is well heated and slag has turned white. Advantages: (1) melting period decreased 40 to 50 min; (2) saving in power consumption (over 20%); (3) 10 to 30% decrease in tungsten loss. Cutters made of R18-steel with 17.5% W (i.e. lowest permissible content) are not inferior to cutters with 19% W. There are 2 tables.

ASSOCIATION: "Elektrostal'" Plant (Zavod "Elektrostal'")

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, A.I.

GRETTE, M.G., nauchnyy sotrudnik; CHEKALOV, A.I., nauchnyy sotrudnik

Shortcomings of orchard machinery. Zashch.rast.ot vred. i bol. 3 no.2:20-21 Mr-Ap '58. (MIRA 11:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Spraying and dusting equipment)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, A. I.

USSR/General and Special Zoology. Insects. Injurious Insects and Ticks. Pests of Fruit and Berry Crops P

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49621

Author : Grotte M.G., Chokalov A.I.
Inst : -
Title : Control of Pests and Diseases of Fruit Plantings.

Orig Pub : Mekhaniz. sil'sk, gospodarstva, 1958, No 5, 20-21

Abstract : No abstract

Card : 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

GROTTE, M.G. [Hrotte, M.H.], naukovyi spivrobitnik; CHEKALOV, A.I., naukovyi spivrobitnik

Investigating the dusting equipment of garden sprayers. Mekh. sil'. hosp. [9] no.5:32 - 3 of cover My '58. (MIRA 11:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Spraying and dusting equipment)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, A.I., starshiy nauchnyy rabotnik

The OVP ventilating sprayer. Mekh. sel'. hosp. 9 no.9:7-8 S '58. (MIRA 11:10)

1.Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Spraying and dusting equipment)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, A.I., starshiy nauchnyy sotrudnik (Kiyev)

Using sprayers in orchards. Zashch.rast.ot vred.i bol. 4 no.3: 23-24 My-Je '59. (MIRA 13:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Spraying and dusting equipment) (Fruit--Diseases and pests)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

GERASIMCHUK, V.G. [Herasymchuk, V.H.], nauchnyy rabotnik; CHEKALOV, A.I., nauchnyy rabotnik

Over-all mechanization of work in orchards. Mekh. sil'. hosp. 10 no.3:17-19 Mr '59. (MIRA 12:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Fruit culture) (Agricultural machinery)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, A.I.; nauchnyy rabotnik; GROMOV, N.G., nauchnyy rabotnik

New nozzle for orchard sprinklers. Mekh.sil'.hosp. 10 no.5:15-16 My '59. (MIRA 12:7)

1. Uzbekskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Sprinklers) (Nozzles)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

SAVICH, P.V., kand.tekhn. nauk; CHEKALOV, A.I., starshiy nauchnyy sotrudnik

Methods for mechanized thinning of sugar beets. Mekh. sil'. hosp. 12 no. 4:11-12 Ap '61. (MIRA 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Sugar beets) (Agricultural machinery)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

S/019/62/000/010/069/090
A156/A126

AUTHORS: Chekalov, B.A.; Sysoyev, I.N.; Ivlyushov, A.V.; Zaslavskiy, M.Z.

TITLE: A boring bar

PERIODICAL: Byulleten' izobreteniy, no. 10, 1962, 65

TEXT: Class 49a, 57. No. 147414 (692867/25-8 of January 13, 1961). 1. The boring bar for boring-out holes consists of a cutter head fastened on a cylindrical mandrel, with balls interacting with the inner surface of the hole being worked. It is distinguished by the fact that, to provide for knurling the bore after it has been bored-out, and maintaining the coaxiality of the cutter head movement, the body of the head is cylindrical and has several grooves supporting the balls in retainers which embrace the body of the head. 2. A boring bar as in 1 is different in that, to permit regulating the position of the balls in a radial direction, the body of the head has a thread carrying an adjusting nut intended for tightening up the retainers.

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L 3179-66 ETC(m) WW

ACCESSION NR: AP5015353 UR/0286/65/000/009/0098/0099
681.14

AUTHOR: Chekalov, D. N.; Mulyar, L. G.; Krasikov, V. I.; Miroshnichenko, A. K.; Smirnov, N. Ye.; Kheyfets, A. I.; Smirnov, K. F.; Obukhov, Yu. A.; Vorontsov, A. M.; D'yakonov, G. M.; Dubro, G. B.; Alipov, A. N.

TITLE: Electronic instrument for measuring velocity, distance traversed, and time. Class 42, No. 170776

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 98-99

TOPIC TAGS: tellurometer, radio rangefinder, geodetic instrument

ABSTRACT: An Author Certificate, issued for a device which measures velocity, distance traversed, and time, combines a high-precision tellurometer, a phase recorder equipped with a unit for converting sinusoidal signals to pulsed signals, and a unit for measuring phase differences. Readings are made visually. The circuit connections of the device, consisting of a series of computer-type modules, are described in detail.

ASSOCIATION: none [SP]

Card 1/2

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L 3179-66

ACCESSION NR: AP5015353

SUBMITTED: 04Mar63 ENCL: 00 SUB CODE: ES, EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4025

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K. I.

PROCESSES AND PROPERTIES INDEX

Preparation and action of "Edelmist." K. I. CHEKALOV AND A. T. KIRSANOV. *Mit. Acherhan* (Leningrad) 1930, No. 31.—In the prepa. of "Edelmist" by the Krantz process, losses of org. matter, P and N are smaller than by the usual method or by loose stacking without pressure. The germinating power of weed seeds is destroyed by the Krantz process. In field trials with cereals, "Edelmist" produced 30-50% greater yields than did yard manures, but showed little superiority with potatoes. B. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K. I

Increasing the quality of organo-mineral fertilizer by composting. K. I. Chekalov. *Zemledelie* 3, No. 7, 56-61 (1955).—In composts, superphosphates and rock phosphate with manure gave similar results. Small doses of superphosphate or rock phosphate (2% of the mass of manure) decreased the loss of org. matter in composts. High applications of rock phosphate (20%) enhanced loss of org. matter; 10% of superphosphate decreased the loss of org. matter. In all cases of composting there was some loss of N. Composted manure and rock phosphate were more effective than mixts. of these at the time of planting.

J. S. Joffe

AG

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K. I.

The methods of determining the forms of phosphoric acid in composts. K. I. Chekalov (All-Union Sci. Research Inst. Fertilizers, Agrotech. and Soil Sci., Leningrad). *Doklady Vsesoyuz. Akad. Sel'skokhoz. Nauk im. V. I. Lenina* 1, No. 1, 24-9(1950).—With the increase (up to 20%) of rock phosphate in the composts the H_2O-sol. P, as well as that of 1% CH_3COOH, decreases. With an increase in diln. from 1:20 up to 1:500 the concn. of P increases. To get an insight into the sol. P upon composting, one should resort to successive extns., up to 10; this gives a better idea of the available P than a single extn.

J. S. Joffe

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K.I.

[Preparation and use of organic and organomineral fertilizers] Prigotovlenie i primenenie organicheskikh i organo-mineral'nykh udobrenii. Moskva, Gos. izd-vo selkhoz lit-ry, 1958. 94 p. (MIRA 11:12)

(Fertilizers and manures)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K.I., kand.sel'skokhoz.nauk

Use of peat and ammonia composts of the industrial production in the Leningrad Province. Torf.prom. 37 no.3:30-32 '60. (MIRA 13:9)

1. Severo-zapadnyy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.
(Leningrad Province-- Fertilizers and manures) (Peat)
(Ammonia)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, Konstantin Ivanovich; DANILEVSKAYA, O.N., red.; ONOSHKO, N.G., tekhn.red.

[Accumulation and storage of manure and preparation of peat composts] Nakoplenie i khranenie navoza i prigotovlenie torfokompostov. Leningrad, Lenizdat, 1960. 67 p. (MIRA 14:4)

(Farm manure) (Compost)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K.I., kand.sel'skokhozyaystvennykh nauk; BAKUSHEVA, V.I., nauchnyy sotrudnik

Commercial peat-ammonium composts. Zemledelie 8 no.6:73-79 Je'60. (MIRA 13:10)

1. Severo-Zapadnyy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.

(Compost)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K.I.; ILLYUVIYEVA, V.P.

Use of the isotope C^{14} to study the decomposition processes of organic matter in soil. Pochvovedenie no.5:40-50 My '62. (MIRA 15:6)

1. Severo-Zapadnyy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.

(Humus) (Carbon--Isotopes)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

K.I. Chekalov, N.I. Morgunov, A.I. Mandelbaum (USSR)

" Production of peat fertilizers at Industrial peat enterprises "

Report submitted for the 2nd International Peat Congress, Leningrad, 15-22 Aug 63.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, K.I., kand. sel'skokhoz. nauk; GALAKTIONOVA, A.A.

Dosage and methods for the admixture of mineral components in the commercial production of peat-mineral-ammonia fertilizers. Trudy VNIITP no.18:38-54 '61. (MIRA 17:1)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

KOPIT, B.S.; MIKHAYLOV, A.V.; CHLENOV, A.F.; IDOV, P.I.; YUKHNOV, I.I.; TSARSKIY, S.V.; BARAUSOV, V.A.; PETROV, A.I.; LIFSHITS, L.Z.; ABATUROV, K.I.; SOKOL'SKAYA, Zh.M.; MEZHEVICH, V.N.; DAVYDOV, L.I.; VLASIKHIN, A.V.; CHUKALOV, L.N.; STARICHKOV, T.I.; KHUBLAROV, A.Ye., red.; PITERMAN, Ye.L., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Our beacons; collection of articles on progressive workers in lumber, paper, woodworking industries and forestry] Nashi maiaki; sbornik ocherkov o peredovykh liudiakh lesnoi, bumazhnoi i derevo-obrabatyvaiushchei promyshlennosti i lesnogo khoziaistva. Moskva, Goslesbumizdat, 1961. 125 p. (MIRA 15:2)
(Forests and forestry) (Wood-using industries)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, L.N.

Kinetics of mass transfer in the rectification of multicomponent mixtures. Khim. prom. 40 no.10:746-749 O '64. (MIRA 18:3)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

SIUTSKIY, Ye.Ya., inzh.; CHEKALOV, M.F., inzh.

Increase the stability of bank piers and cones of medium-size bridges. Avt. dor. 28 no.2:27-28 F '65. (MIRA 18:6)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, V. P.

Drive your streetcar carefully, economize on electric power. Zhil.-kom. khoz. 3 no.5:29-31 My '53. (MLRA 6:7)

(Street railroads)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOV, V.P.; TAMAROVICH, M.A., redaktor; GUROVA, O.A., tekhnicheskiy redaktor.

[An exemplary method for the streetcar conductor] Obrastsovo vodit' tramvainye poezda. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1954. 22 p. (MLRA 7:12)
(Electric railroads--Motormen's manual)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.

Composition of the water-insoluble residue of cheese and its transformation. I. Klinovskii, T. Tikhonova, K. Chekalova, and N. Shlyapnikova. *Molochnaya Prom.* 17, No. 7, 28-9(1953).—Changes in Holland's Edam-cheese protein complex resulting from the ripening process were detd. as follows: 0.5 g. of the water-insol. residue (I) of cheese was digested in 30 ml. of 0.2% soln. of NaOH for 5 hrs. at room temp. The digest was then centrifuged and $CaHPO_4$ sediment washed with NaOH soln. The supernatant liquid was brought to pH 4.6 with AcOH to ppt. the paracasein (II) and the mixt. centrifuged. The albuminous matter (III) in the second supernatant liquid and wash water from II was pptd. with CCl_3COOH (added up to 4%) and then centrifuged. The last supernatant and $CaHPO_4$ contained no N. The study revealed that $CaHPO_4$, II- and III-resembling proteoses are the major constituents of I, that III not only contained no P, but that its concn. in I increased with the ripening time. The concn. of P in II remained relatively const. during the ripening period and corresponded to that of II in fresh cheese and casein in milk. The authors believe that the above results are conclusive in showing that not all of the paracasein mols. are simultaneously degraded by the enzymes, that a large part of II remained unaffected by these proteases, and that III is a fragment of II. Consequently, the changes in the N. compn. of cheese could not be considered as an evidence that all of the II undergoes chem. changes during ripening. V. K. K.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.

Nature of the soluble albuminous matter in Holland's cheese. I. Klimovskii, K. Chekalova, T. Tikhomirova, and N. Shlyapnikova. *Molochnaya Prom.* 18, No. 1, 25-6 (1957).—Water-sol. albuminous matter of Edam cheese was obtained as follows: A weighed portion of cheese was re-emulsified in distd. water at 45-50° in 1:4 ratio. The mixt. was left for 3 hrs. at room temp. and then centrifuged. The supernatant liquid was brought to pH 4.6 with AcOH to ppt. the 1st fraction (I) and the mixt. centrifuged. The albuminous matter (II) in the 2nd supernatant liquid and the wash-water from I was pptd. with CCl_3COOH (added up to 4.5%); the mixt. was left for 12 hrs. and then centrifuged. I and II were treated with alc. and Et_2O and then dried at room temp. prior to analyses. The study revealed that I and II contained, resp., 35-7 and 23-4 atoms of N/atom of P as compared with 44-7 atoms of N in the paracasein, and that the concn. of I and II in cheese increased with the ripening time. The concn. of inorg. P in cheese, however, remained relatively const. during the ripening period and that of nonalbuminous org. P increased several times owing to the synthesis of phosphopolypeptides. In addn. purine bases were detected spectrophotometrically in I, but not in II. It is concluded that the water-sol. albuminous matter in Edam cheese is a mixt. of different substances derived from paracasein through proteolytic action and contg. nucleoproteins from autolyzed bacterial cells.

Vladimir N. Krukovsky

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.

Polypeptides and phosphorus-containing compounds in Holland's cheese and their relation to the ripening process. I. Klimovskii, T. Tikhomirova, K. Chekalova, and N. Shlyamikova. *Molochnaya Prom.* 18, No. 3, 30-2(1957); cf. *C.A.* 51, 7504i.—Paracasein degradation into simple polypeptides (I), phosphopolypeptides (II), and free amino acids was studied by remulsifying a weighed portion of cheese in distd. water at 45-50° in 1:4 ratio. At the end of 2 hrs. at room temp. the mixt. was centrifuged, and the sediment was washed with distd. water and recentrifuged 3 times. The albuminous matter in the supernatant liquid was pptd. with CCl_3COOH (added up to 4.5%) and centrifuged. The supernatant liquid brought to pH 5.0 with NaOH was then treated with 20% soln. of tannin to ppt. I and the mixt. centrifuged. The last supernatant liquid was finally treated with alc. to obtain II. I was extd. with Et_2O, washed with $(CH_3)_2CO$, and then dried at room temp. The data show that I and II were formed in the course of cheese ripening and that II contained relatively large amts. of P. Furthermore the concn. of org. nonalbuminous P increased with time, while that of inorg. P in the water-sol. part of cheese remained relatively const. during the ripening period, suggesting a possibility that phosphoric acid was not set free from II in detectable amts. It was concluded, therefore, that the proteolytic splitting of the paracasein mol. was not carried on to a point of a complete liberation of all the amino acids in the mol.

Vladimir N. Krukovsky

All-Union Sci. Res. Inst. Butter & Cheese Industry

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.A.

Hypogenic gypsum from the Tuyuk lead-barite deposit in the Ketmen'Range. Izv. AN Kazakh.SSR. Ser.geol. no.6: 94-98 '62. (MIRA 16:5)

(Ketmen' Range—Gypsum)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.A.

Hydrothermal changes of enclosing rocks in the Tuyuk lead-barite deposit. Trudy Inst.geol.nauk AN Kazakh.SSR 7:77-95 '63.
(MIRA 17:9)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, K.A.

Alterations of the wallrock of copper and lead manifestations in the Ketmen' Range. Vest. AN Kazakh. SSR 20 no.2:59-70 F '64. (MIRA 18:1)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

2

The characteristics of the dark-colored soils of Trans-Onega region. A. A. Zavalishin and M. I. Chekalova (V. V. Dokuchaev Soil Museum, Moscow). *Pochvovedenie* 1956, No. 7, 30-9.—Soils formed on schungite shale are high in org. matter to depths as much as 40 cm., have pH 6.0-8.2, a Ca:Mg ratio (with some exceptions) of 20 or more, and are high in R_2O_3, high in alk.-earth bases, low in alkali bases, and relatively high in P. The specificity of these soils in the Karelia region is due to the compn. of the parent material. I. S. Joffe.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHERKALOVA, M. I.

BUTUZOVA, O.V.; [redacted]

Exposition of agricultural zoning and land reclamation in various regions of the U.S.S.R. Sbor. rab. TSentr. muz. pochv. no.2:11-26 '57. (MLRA 10:8)

(Agriculture)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, M. I.

Characteristics of the present state of land on collective farms of the central part of Vologda Province. Sbor. rab. TSentr. muz. pochv. no.3:174-191 '60. (MIRA 13:9)
(Vologda Province--Soils)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, M.I.

Characteristics of dark-colored soils in the forest zone.
Pochvovedenie no. 2:25-32 F '65 (MIRA 19:1)

1. Tsentral'nyy muzey pochvovedeniya imeni Dokuchayeva. Submitted June 10, 1963.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, N.N.

S/020/60/134/006/020/031
B016/B067

AUTHORS: Topchiyev, A. V., Academician, Nifontova, S. S., Musayev, I. A., Sanin, P. I., Suchkova, A. A., Pushchik, R. Ya., and Chekalova, N. N.

TITLE: Methods of Isolating Aromatic Hydrocarbons From Medium (Kerosene) Petroleum Fractions

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 6, pp. 1378-1380

TEXT: The authors give the results of an investigation of the hydrocarbon composition of the petroleum fractions in which the aromatic hydrocarbons were chromatographically separated by using two adsorbents. A petroleum sample from the Romashki oil-field was studied. The benzine fractions boiling out at 175°C and the asphalt-resin substances were removed. The thus treated petroleum was fractionated in a vacuum apparatus and the corresponding fractions were separated. A characteristics of the fraction 175 - 300°C is described. Among the different methods employed for investigating the chemical composition the chromatographic

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isolation and separation of the aromatic hydrocarbons were dealt with in detail. The authors obtained good results by 2-step chromatography: first, all aromatic hydrocarbons are isolated and separated; the isolated substances are then separated according to their types. Isolation took place from the fraction by displacement chromatography on silica gel. Ethanol was used as displacing agent. Silica gel of type ACM (ASM) was treated by I. A. Musayev and E. Kh. Iskhanova prior to its use (Ref. 8). Seven fractions of aromatic hydrocarbons with the refractive indices of 1.49 to 1.55 were isolated. The sulfur-containing compounds were removed by oxidation with 25% H_2O_2 solution in glacial acetic acid at 80°. The sulfoxides formed were then chromatographically separated on silica gel ACK (ASK). The further sharp separation of the thus purified mixture of mono- and bicyclic aromatic hydrocarbons was carried out chromatographically with aluminum oxide of type ГУ-МУП (GU-MEnP) of the Dneprodzerzhinskiy saved (Dneprodzerzhinsk Plant) as adsorbent. For this purpose a 2 m high column was used. Successive isooctane, benzene, and isopropyl alcohol were used as desorbents. Under these conditions the monocyclic hydrocarbons can be quantitatively separated from the bicyclic ones. Table 1

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gives the results of the separation of tert.-isobutyl-ortho-xylene from butyl naphthalene and of tert.-isobutyl-ortho-xylene from diphenyl. This indicates that the chromatographic separation on silica gel produces much poorer results since in this case a high amount of intermediate fractions are formed. Among the above described conditions the total amount of monocyclic hydrocarbons (referred to the aromatic part) was 77.93%, that is 13.11% of the fraction 175-300°C, whereas the figures for the bicyclic were 17.91 and 3.01%, respectively. In conclusion the authors mention further components of the fraction described and their total percentual composition. There are 1 table and 8 references: 4 Soviet, 1 US, 1 French, and 2 German.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences, USSR)

SUBMITTED: July 21, 1960

Card 3/3

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

TOPCHIYEV, A.V., akademik; NIFONTOVA, S.S.; MUSAYEV, I.A.; SANIN, P.I.; SUCHKOVA, A.A.; SUSHCHIK, R.Ya.; CHEKALOVA, N.N.

Method of separating aromatic hydrocarbons form middle (kerosine) petroleum fractions. Dokl. AN SSSR 134 no.6:1378-1380 O '60. (MIRA 13:10)

1. Institut neftekhimicheskogo sinteza Akademii nauk SSSR.
(Hydrocarbons) (Chromatographic analysis)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

TOPCHIYEV, A.V.; NIFONTOVA, S.S.; MUSAYEV, I.A.; SANIN, P.I.; SUCHKOVA, A.A.; SUSHCHIK, R. Ya.; CHEKALOVA, N.N.

Methods of isolating aromatic hydrocarbons from intermediate (kerosine) petroleum fractions. Trudy Inst. nefti 14:12-57 '60. (MIRA 14:5)

(Hydrocarbons)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, N.N.

31975
S/081/61/000/023/046/061
B138/B101

110130

AUTHORS: Topchiyev, A. V., Nifontova, S. S., Musayev, I. A., Sanin, P. I., Suchkova, A. A., Sushchik, P. Ya., Chekalova, N. N.

TITLE: Separation of aromatic hydrocarbons from the medium (kerosine) fractions of petroleum

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 447 - 448, abstract 23M64 (Tr. In-ta nefti. AN SSSR, v. 14, 1960, 12-57)

TEXT: Research work has produced a method for dividing petroleum into distillate fractions and separating the narrow aromatic hydrocarbons from the broad aromatic fraction 175 - 300°C of Romashki petroleum by chromatographic fractionation over silica gel АСМ(ASM). They are divided into structural types and a partial study has been made of the monocyclic aromatics. The possibility of quantitative fractionation by chromatography over home-produced Al_2O_3 is demonstrated for the case of artificial mixtures of mono- and bicyclic aromatics. When aromatics are separated from the naphtheno-paraffin part over silica gel, they need not be separated in the form of narrow fractions according to $n^{20}D$. However,

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B138/B101

Separation of aromatic hydrocarbons...

they can quite well be separated as one whole aromatic fraction which can then, over Al_2O_3, be divided into mono-, and bicyclic, or higher, molecular aromatic hydrocarbons. The overall hydrocarbon composition of the Romashki 175 - 300°C fraction has been found (in %); monocyclic aromatics 13.11; bicyclic aromatics 3.01; aromatics of mixed structure 0.7; hexamethylene hydrocarbons 6.4; pentamethylene hydrocarbons 11.5; normal paraffinous hydrocarbons 17.5; isoparaffinous 41.2 and organosulfur compounds 6.58 separated by oxidation. [Abstracter's note: Complete translation.]

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVA, T.F., inzh.

Ways for the technical reorganization of the linen industry. Tekst. prom. 19 no.5:16-20 My '59. (MIRA 12:10)

1.Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov RSFSR.

(Linen)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVSKIY, YE. F.

AID P - 1875

Subject : USSR/Meteorology and Hydrology

Card 1/1 Pub. 71-a - 18/26

Author : Chekalovskiy, E. F.

Title : On an illogical requirement of the Directives

Periodical : Met. i gidro., no.2, 47, 1955

Abstract : Criticism on the computation of flow velocity as ordered by the Nastavleniya Gidrometeorologicheskim Stantsiyam (Directives to Hydrometeorological Stations).

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALOVSKIY, Ye.F.

Methodology of measuring low-water discharges of small rivers. Sbor. rab. Kuib. gidromet. obser. no.2:102-115 '65

Volume of flow of the spring flood of the rivers of Orenburg Province. Ibid.:116-126 (MIRA 18:10)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E. B.

PA 65T92

USSR/Physics May 1948
Sound Waves
Wave Propagation

"Effect of Inertia Forces on the Speed of Wave Propagation in a Porous Space," E. B. Chekalyuk, 4½ pp

"Neft Khoz" Vol XXVI, No 5

Author refers to article by Prof V. N. Shchelkachyev. Speed of sound in given flexible medium is equal to speed of propagation of deflected waves in porous space. Speed of deflected waves of sound frequency in liquid saturating porous space is one tenth that of the speed of sound in clear

LC 65T92

USSR/Physics (Contd) May 1948

liquid. So-called "surface waves," in given case, can in no way be distinguished from "sound waves." Gives equation for the speed of expansion of periodic volumetric deformations in porous medium, along with formulas for the speed of deflected waves of sound frequency in liquid, speed of propagation of surface waves, etc.

LC 65T92

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E. B.

AID - P-160

Subject : USSR/Engineering

Card : 1/1

Authors : Chekalyuk, E. B., Oganov, K. A., Stepanchikov, E. A. and Snarskiy, A. N.

Title : Thermal Treatment of Exhausted Oil Stratum. (Part I)

Periodical : Neft. khoz., v. 32, #1, 33-38, Ja 1954

Abstract : Injection of a preheated medium along the old stratum is outlined for the increase of output of exhausted oil well. A thermodynamic equation is developed for heat distribution around the injected medium. Two charts and tables (Part II will be in next issue).

Institution : Institute of Fuel Resourses, Ac. of. Sci., USSR.

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E.B.

AID P - 823

Subject : USSR/Mining

Card 1/1 Pub. 78 - 8/26

Authors : Oganov, K. A., Chekalyuk, E. B. and Snarskiy, A. N.

Title : Rational method of heat treatment of the oil shelf based on the results of laboratory investigation

Periodical : Neft. khoz., v. 32, #9, 33-38, S 1954

Abstract : The author describes an experiment with a sand model filled with oil on the application of heat treatment to the oil shelf for the increase of maximum output of the oil well. Comparative displacements of oil from the sand model were made under hydrostatic pressure of the water column, under various pressures of pumped nitrogen, cold and heated water, and finally steam. The description is illustrated with formulas and numerical examples of computation of thermal processes. 2 tables, 2 drawings and 1 Russian reference (1954).

Institution: None

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E.B

AID P - 2095

Subject : USSR/Mining

Card 1/1 Pub. 78 - 8/24

Author : Chekalyuk, E. B.

Title : Temperature field of a stratum in the case of pressure pumping of a heat carrier into the well

Periodical : Neft. khoz., v. 33, no. 4, 39-42, Ap 1955

Abstract : The author analyses the temperature conditions and heat transfer which result around the well when a heat-carrying liquid is pumped under pressure for secondary recovery of partly exhausted petroliferous oil strata. Formulae, charts.

Institution: None

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALUK, E.B.

1

324. Heat treatment of old oil reservoir. E. B. Chekaluk *et al.* *Nafta (Krakow)*, 1955, **11**, 207-11. The work done by the U.S.S.R. Academy of Sciences in 1934-40 was without industrial effects. This article gives the mathematical theory of the operation. Under 4 headings the authors consider: (1) how heat spreads from the point of its introduction; (2) losses from the formation; (3) losses at the point of introduction; (4) practical calculation of heat balance. (1) $dQ_{rock} = 2\pi r$(spec heat of rock/cu. m.) $\times \Delta T \times dr$ and $dQ_{of\ heating\ medium} =$ Volume velocity $\times$ (spec heat of medium/cu. m.)$\Delta T dt$, ignoring any losses. Then

$$\Delta T = f\left(t - \frac{\pi \times \text{porosity} \times \text{Sp. ht.}_{rock}}{\text{Vol. velocity} \times \text{Sp. ht.}_{med.}}(r^2 - r_0^2)\right).$$

When the hot medium penetrates the rock it has the same effect as if a hot wave moved radially from the centre, and it is possible to pump in cold medium in its wake. Analysing the effects of various media, the authors find water at 200° C and 16 atm the best. It will get all residual crude from sandstone. (2) Losses from roof and base of formation,

$$Q_{loss} = \tfrac{1}{2}\pi r\sqrt{\frac{\text{Porosity of rock} \times \text{Sp. ht. of med.}}{\text{Visc. of medium} \times \text{Vol. vol. med.}}} \times \Delta T \times r^2 \quad \text{(approx)}$$

if r denotes the extent of hot "pancake"-shaped formation; if cold water follows hot, losses are limited, since only the hot section of the "pancake" loses heat. (3) Losses at the borehole are generally as large as those mentioned in (2), but can be considerably cut by using pipes of low conductivity. (4) Takes into account the variation in porosities and conductivities encountered in actual cases, as well as tectonic interferences wherever they occur. Practical difficulties and advantages are described.

M. S.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E. B. Cand Tech Sci -- (diss) "Nonstationary Phenomena of the Flow of Homogeneous Fluids from a Porous Medium." L'vov, 1957. 15 pp ~~xxxxxxxxxx~~ with graphs 21 cm. (Min of Higher Education Ukrainian SSR, L'vov Polytechnic Inst), 100 copies (KL, 26-57, 109)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

11(0)

AUTHOR: Chekalyuk, E.B. SOV/93-58-11-8/15

TITLE: A Method for Determining Physical Characteristics of Oil-Bearing Formations (Metod opredeleniya fizicheskikh parametrov plasta)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 11, pp 42-48 (USSR)

ABSTRACT: The methods for determining the physical characteristics of oil-bearing formations, developed by I.A. Charnyy and I.D. Umrikhin [Ref 1] and by G.I. Barenblatt, Yu.P. Borisov, S.G. Kamenetskiy, and A.P. Krylov [Ref. 2], take into account the effect of oil inflow after well shutoff on the bottom hole pressure build-up, and improve the accuracy of the determinations. But each determination by these methods requires a minimum of six operations of numerical integration. The author suggests shorter method for the necessary calculations. By this method the bottom hole pressure build-up curve is directly recorded by a depth manometer and the borehole fluid accumulation curve is constructed on the basis of pressure data with the aid of the following formula: $V(t) = [(F_t + F\delta)\Delta P(t) - F_t\Delta F_t(t) - F\delta(t)\Delta P\delta(t)]:\gamma_l$, where $V(t)$ is the borehole fluid accumulation curve, F_t - the cross section area of the liquid column in the annular space, $F\delta$ - the cross section area

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

of the liquid column in the tubing, γ - the specific gravity of the bottom hole crude, $\Delta P(t)$ - the increase in bottom hole pressure, and $\Delta P_{\delta}(t)$ - the change in the tubing pressure. The next step is constructing a bottom hole pressure build-up curve in a special system of ΔP and $G(t)$ coordinates and present $\Delta P(t-\tau)$ as a function of $G(\tau)$. This function can be constructed with the aid of a special template shown in Fig. 1. The area bound by the curve $P(t-\tau) = f[G(\tau)]$ and the coordinate axis corresponds to the so-called Duhamel integral $D(t)$ in kg/sq cm. The value of this integral is determined with the aid of the formula of tangents and is presented as follows: $D(\bar{t}) = \frac{G(\bar{t})}{n} \sum_{\nu=0}^{n-1} \Delta P(\nu + 1/2)$, where n is the number of intervals of the function's argument. The coordinates of the points of the bottom hole pressure curve are determined with the aid of the following formula: $x = \ln t$ and $y = \frac{\ln \bar{t} D(\bar{t})}{m[Q_0 t - V(t)]}$,

where Q_0 is the yield of the well prior to shutoff and t - the time in seconds. The permeability of the formation is expressed by $\frac{kh}{\mu} = \frac{1}{2\pi i}$, where k is the permeability of the formation in Darcies, h - the capacity of the formation in cm, and μ - the viscosity of the crude in the formation in centipoises. The relative piezo conductivity of the formation is expressed by $\frac{\varkappa}{r_0^2} = e^{-x_0}$,

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where $\varkappa$ is the piezo conductivity of the formation in sq, cm/sec and r_o - the radius of a perfect well or the equivalent effective radius of a well. The space of the producing sector of the borehole or the volume of rock drilled in the formation is presented by $V_p = \pi r_o^2 h = \frac{e^{x_o}}{2l\beta^*}$, where β^* is the formation pressure in sq cm/kg. The relative effective radius of the well at the moment of shutoff is presented by $\frac{R_t}{r_o} = \sqrt{\frac{\varkappa}{\pi r_o^2} T_o}$, where T_o is the operating time of the oilwell prior to shutoff. The productivity coefficient of the well at the moment of shutoff is presented by $K_t = \frac{2\pi kh}{\mu \ln \frac{R_t}{r_o}}$. The decline in the effective operation of the well prior to shutoff is presented by $\Delta P_o = \frac{Q_o}{K}$. The practical application of this method is illustrated in the text and the initial data as well as the results are presented in Table 1 and Figs. 2-3. The details on the development of these formulas are explained in supplementary notes. There are 3 figures, 1 table and 3 Soviet references.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E.B.

Temperature conditions of gas and petroleum-bearing strata. Trudy VNIGNI no.12:329-337 '58. (MIRA 12:3)
(Petroleum engineering) (Earth temperature)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

CHEKALYUK, E.B.

Study of petroleum-bearing strata. Trudy VNIGNI no.12:338-358 '58. (MIRA 12:3)

(Petroleum engineering)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308310005-1

C-4 E-Klutke, E.B.

5(5) PHASE I BOOK EXPLOITATION SOV/2682

Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut

Voprosy poiskov, razvedki i dobychi nefti i gaza na territorii USSR; doklady na vyezdnoy sessii nauchnykh sovetov VNIGNI i VNII, prokhodivshey v g. L'vove v maye 1957 g. (Problems in the Exploration and Production of Oil and Gas in the Ukrainian SSR; Reports Presented at a Session of the Scientific Councils of the All-Union Petroleum Scientific Research Institute for Geological Survey and the All-Union Scientific Research Institute, in Lvov, May 1957) Moscow, Gostoptekhizdat, 1959. 282 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Ministerstvo geologii i okhrany nedr.

Eds.: I. G. Muranov, V. V. Glushko, and A. S. Muromtsev; Executive Eds.: S. M. Pungans, and A. I. Zaretskaya; Tech Ed.: I. G. Fedotova.

PURPOSE: This book is intended for petroleum geologists and Ukrainian area specialists.

COVERAGE: This book contains 27 reports originally read at a meeting of the scientific councils of the VNIGNI (All-Union Petroleum Scientific Research Institute for Geological Survey), the VNII (All-Union Scientific Research Institute), the Vniiges, Uzneft', Uzgas, Uzvostokneftepromsvedka, Uzneftegazrazvedka, and Uzneftegeofizika held in L'vov in May, 1957. The papers deal with the petroleum geology of the Dnepr-Donets depression, the Carpathians, Ciscarpathia, the southwestern fringe of the Russian Platform, and the northern Black Sea area. Particular attention is given to describing the geological features of those regions most likely to bear oil. Other articles discuss oil production techniques and ways of increasing drilling speed in deep wells. No personalities are mentioned. References accompany individual articles.

Bobolintsev, F. D. Basic Geological Results of the Geophysical Investigations Carried Out in 1956 in the Dnepr-Donets Depression 165

Fabalov, K. V. The State of Oil Production in the Ukrainian Oil Industry and Ways of Increasing It 173

Sinitsin, S. K., and A. A. Lashchinskiy, V. A. Sinitsin, General Layout and Analysis of the State of Exploitation of the Dolina Oil Pool 181

Rozenberg, M. D. Methods of Hydrodynamic Computations for the Exploitation of Oilpools Under a Dissolved Gas Regime and the Displacement of Gas-charged Petroleum by Water 192

Chebotarev, E. A. Hydrodynamic Methods of Oil Well Testing in the Ukrainian SSR 205

Sarakiy, A. N. Thermal Methods of Activating an Oil Bed in Order to Increase the Production of Petroleum 216

Ovnov, K. A. Results of Oilfield Experience in Thermally Activating an Oil-bearing Bed and Ways of Further Development of This Method 223

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