LEVCHENKO, D.N.; YERMILOV, A.S.; TEPLYKH, G.A.; VOLOBUYEV, N.K.

Use of ultrasound for deemulsifying stable petroleum emulsions. Prim. ul'traakust. k issl. veshch. no.14:337-343 '61. (MIRA 14:12)
(Ultrasonic waves--Industrial applications) (Emulsions)

L 42209-66 EWT(m)/T DJ/WE/GD

ACC NR: AT6013184 (N) SOURCE CODE: UR/0000/61/000/000/0337/0343

AUTHORS: Levchenko, D. N.; Yermilov, A. S.; Teplykh, G. A.; Volobuyev, N. K. 46 43 B+1

ORG: none

TITLE: Application of ultrasound in de-emulsification of stable oil emulsions 11 12

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k issledovaniyu veshchestva, no. 14, 1961, 337-343

TOPIC TAGS: ultrasound, emulsion, ultrasonic equipment, ultrasonic petroleum purification, ultrasonic vibration emitter, barium titanate / OP-10 de-emulsifier, VNII NP-58 de-emulsifier, KS-59 de-emulsifier

ABSTRACT: De-emulsification by means of ultrasound was studied on stable, aged, oil-water emulsions from traps and storehouses of the Moscow refineries. Three ultrasound generators (3.2 and 0.6 kilowatt capacities) and vibrators (magnetostrictive, barium titanate, flat, and focusing) were employed in the study. The degree of de-emulsification was determined as a function of the height of the sonicated emulsion layer, sonication time, and ultrasound field intensity. It was established that the investigated emulsions can be destroyed when treated with ultrasound with a frequency of 20—750 kHz. The de-emulsification degree increases with increased ultrasound field intensity and time of treatment, and decreases with increased emulsion layer. The sound frequency is inversely proportional to the optimal thickness

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L 42209-66

ACC NR: AT6013184

3

of the destroyed emulsion. The most promising vibrators are barium titanate pipes and hydrodynamic vibrators used in conjunction with de-emulsifiers OP-10, VNII NP-58, and KS-59.//Orig. art. has: 2 tables and 8 figures.

SUB CODE: 07, 20, 11/ SUBM DATE: 22Apr61

Card 2/2 af

YERMILOV, A.V., gornyy insh.; ZAGORUYKO, G.K., gornyy insh.

Magnitude of advance in stripping operations at the Ufaley open-pit mines. Gor. shur. no. 12:19-22 D '65. (MIRA 18:12)

1. Ufaleyskiy nikelevyy kombinat.

PRIKHOD'KO, V.V., gornyy inzh.; YERMILOV, A.V., gornyy inzh.

Drainage of the Lake Chernoye deposit with water level reduction wells. Gor. zhur. no.7:23-24 Jl '61.
(MIRA 15:2)

1. Ufaleyskiy nikelevyy zavod.
(Chernoye Lake region—Mine drainage)

YERMILOV, A.V.

New data on the stratigraphy of Lower Permian marine sediments in the southwestern part of the Chernyshev Ridge. Trudy Inst.geol. Komi fil. AN SSSR no.2:27-31 '62. (MIRA 15:7)
(Chernyshev Ridge--Geology, Stratigraphic)
(Chernyshev Ridge--Deep-sea deposits)

KIM, M.V.; BITADZE, M.A.; YERMILOV, B.F.; ZYDEL', A.I.; KUSHNEV, A.P.; LAZAREV, N.N.; MIRAV'YEV, D.M.; BONDAREV, P.D., kand. tekhn. nauk, nauchnyy red.; OSENKO, L.M., red.izd-va; RODIONOVA, V.K., tekhn.red.

[Erection of foundations under permafrost conditions; from practice used in the Norilsk region] Vozvedenie fundamentov v usloviiakh vechnomerzlykh gruntov; iz opyta Noril'skogo raiona. Moskva, Gosstroiizdat, 1962. 53 p. (MIRA 15:9)

1. Russia (1917- R.S.F.S.R.) Krasnoyarskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. (Foundations) (Noril'sk--Frozen ground)

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/4143

Avtomatizatsiya mekhanicheskoy obrabotki v Leningradskoy promyshlennosti (Automation of Mechanical Machining Processes in Leningrad Industry) Moscow, Mashgiz, 1959. 358 p. Errata slip inserted. 4,000 copies printed.

General Ed.: I.M. Kucher; Reviewers: N.V. Reshetikhin, Candidate of Technical Sciences, Docent, and Ye. V. Miller, Candidate of Technical Sciences, Docent; Eds. of Publishing House: T.L. Leykina and M.A. Chfas; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for technical personnel.

COVERAGE: The book deals with the automation of mechanical machining processes in small-lot production in Leningrad industry. The use of hydraulic copying slide rests is explained, and practical experience in the introduction of copying slide rests into leading Soviet plants is described. The improvement of such slide rests, the technical and economic effects resulting from their usage, and methods of designing master forms are discussed. New designs of hydraulic slide rests are described. Emphasis is laid upon problems of program control, especially for the simplest control systems, and a number of the original systems are described. Automation problems involved in the group machining method are investigated. No personalities are mentioned. There are 57 references: 46 Soviet and 11 English.

AVAILABLE: Library of Congress

Card 5/5

VK/ps/mas
10-25-60

YERMILOV, B.L.

report to be presented at the 1st Intl Congress of the Intl Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

VORONOV, A. A., YERMILOV, B. L., and SHENKLEY, S. N. - "Some problems of the synthesis a . analysis of digital analogues for automatic control"
KEFROTHEVICH, Ye. Ye. - "Complex automation of technological processes of smelting steel in arc furnaces"
ZAIMOVSKIY, L. A. - "Bases of the theory and calculation of elements of automatic pneumatic machines"
KUDRIN, V. G., - "The problem of digital program control of metal-cutting machines"

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/5094

Voronov, Avenir Arkad'yevich, A. R. Garbuzov, B. L. Yermilov, M. B. Ignat'yev, G. G. Kornitenko, G. N. Sokolov and Yang Hsi-Tseng

Tsifrovyye analogi dlya sistem avtomaticheskogo upravleniya; tsifrovyye raznostnyye analizatory (Digital Analogs for Automatic Control Systems; Digital Differential Analyzers). Moscow, Izd-vo AN SSSR, 1960. 195 p. Errata slip inserted. 7,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut elektromekhaniki.

Ed.: A. A. Voronov, Doctor of Technical Sciences; Ed. of Publishing House: I. V. Barkovskiy; Tech. Ed.: V. T. Bochever.

PURPOSE: This book is intended to acquaint scientific and technical personnel with the latest developments in the field of computers.
INST: Institute Electromech AN SSSR (for all except Barkovskiy, Bochever)
COVERAGE: Digital differential analyzers are a relatively new development in the field of computers and are not yet well elaborated theoretically. Some of the newest developments in combining universal digital machines

Card 1/8

Digital Analogs for Automatic (Cont.) SOV/5094

with nonlinear interpolators, such as the Ferranti interpolator, are as yet unknown to Soviet readers. While the Soviet literature contains several works describing the principles of construction and operation of differential analyzers intended for operation as computers, the main emphasis in this book is on general methods of synthesizing those machines which are intended to work as systems of automatic control, and also on problems of accuracy in operation. At present digital analogs are used mostly for programmed control of metalworking machines, where several operations, such as preparing data for control, feeding them into the computer, the computing process, and the process of control, are involved. The book investigates only the computing units of the control system. The authors state that the error of integration can be reduced by increasing the number of columns of multidigit numbers in the addend registers or by transition to more accurate, though more complicated, algorithms of approximate integration. However, they find that this complicates the system, and suggest a method which permits simplifying the system while maintaining its accuracy; that is, proceeding from difference, instead of differential, equations. A digital analog based on such principles should be called a digital "difference" analyzer instead of "differential" analyzer. The book discusses problems

Card 2/3

Digital Analogs for Automatic (Cont.) SOV/5094

of synthesis and analysis of both difference and differential equations. Ways to reduce errors and simplify the arrangement of such computers are indicated. The book attempts to present certain theoretical developments in this field and as a first attempt does not claim to give a full solution of the problem. It also includes some general information on systems of computation and on their basic units and presents examples of difference analyzers developed at the Institute of Electromechanics, AS USSR. The introduction, pars. 1-6 and 8 of Ch. III, Ch. IV, pars. 1 and 4 of Ch. V, and pars. 3 and 4 of Ch. VIII were written by A. A. Voronov; pars. 1 and 2 of Ch. VIII by A. R. Garbuzov; Ch. I by B. L. Yermilov; par. 7 of Ch. III and Appendix I by M. B. Ignat'yev; Ch. II by G. G. Kornitenko; and Ch. VI by G. N. Sokolov, all coworkers of the Institute of Electromechanics, AN USSR. Pars. 2 and 3 of Ch. V were written by Yang Hsi-Tseng, coworker of the Academy of Sciences, Chinese People's Republic, and Chapter VII was written jointly by A. A. Voronov and B. L. Yermilov. No personalities are mentioned. There are 76 references: 39 Soviet (including 1 in French and 1 translation) and 37 English.

Card 3/8

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/4706

Akademiya nauk SSSR. Institut elektromekhaniki

Sbornik rabot po voprosam elektromekhaniki, vyp. 4: Elektricheskiye mashiny, elektricheskiy privod, elektricheskaya tyaga na peremennom toke, avtomatizirovannyy elektroprivod teleskopov, avtomaticheskoye regulirovaniye i pribory (Collection of Works on Problems in Electromechanics, No. 4: Electric Machines, Electric Drive, A-C Electric Traction, Automated Electric Drive of Telescopes, Automatic Regulation and Instruments) Moscow, 1960. 282 p. 1,500 copies printed.

Resp. Ed.: V. V. [illegible]; Ed. of Publishing House: L. V. Severov; Tech. Ed.: R. A. [illegible].

PURPOSE: This collection of works is intended for specialists in electromechanics.

COVERAGE: The collection contains 26 works divided into three sections: 1) Electric Machines, 2) Electric Drive and Electric Traction; 3) Automated Electric Drive, and Automatic Regulation and Instruments. No personalities are mentioned. References accompany most of the articles.

AUTOMATED ELECTRIC DRIVE. AUTOMATIC REGULATION AND INSTRUMENTS

(2/6)

PHASE I BOOK EXPLOITATION SOV/4411

Konferentsiya po voprosam teorii i primeneniya diskretnykh avtomaticheskikh sistem, Moscow, 1958

Teoriya i primeneniye diskretnykh avtomaticheskikh sistem; trudy konferentsii (Theory and Application of Discrete Automatic Systems; Transactions of the Conference) Moscow, AN SSSR, 1960. 572 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po avtomaticheskomu upravleniyu. Institut avtomatiki i telemekhaniki.

Editorial Board: M.A. Gavrilov, Doctor of Technical Sciences, Yu.V. [illegible], Doctor of Technical Sciences, V.A. Kotel'nikov, Candidate of Technical Sciences, A.Ya. Lerner, Doctor of Technical Sciences, I.S. Morosanov (Scientific Secretary), G.S. Pospelov, Doctor of Technical Sciences, A.A. Fel'dbaum, Doctor of Technical Sciences, A.V. Khramoy, Candidate of Technical Sciences, and Ya.Z. Tsypkin, Doctor of Technical Sciences; Resp. Ed.: Ya.Z. Tsypkin, Doctor of Technical Sciences; Ed. of Publishing House: M.L. Podgoyetskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: These transactions are intended for the members of the conference and other specialists in automatic control.

COVERAGE: The Conference on the Problems of Theory and Application of Discrete Automatic Systems took place in Moscow from September 22 to 26, 1958. It was the first conference devoted to discussions of the present status of the theory and techniques of discrete automatic systems and to planning for future development. The papers discussed at the conference have been divided into four groups. In the first group optimization switching circuits are discussed as well as methods of relay control systems, in particular plant lag control systems in which are realized optimal processes as to quick response. The second group of papers is devoted to the analysis and synthesis of pulse systems with variable parameters, of pulse systems with several pulse components, to the study of self-oscillation phenomena in nonlinear pulse systems, and to the methods of calculating linear pulse systems. Problems of simulating pulse systems and descriptions of some pulse regulators have also been included. The third group of papers deals with digital systems. Problems of using elements of digital technique and digital computers for the automation of various fields of engineering, i.e., power engineering, mining, radio communication, metallurgy, etc., are discussed. Problems of analog-digital conversion and vice versa as well as problems of developing specialized functional converters have been included in this group. The fourth group of papers includes theoretical elements and certain practical applications of the simplest types of self-adjusting systems, optimalizing control systems, which are developed as relay, pulse and digital devices. Here are also found papers describing various methods of investigating steady state conditions in optimalizing systems, results of studying the effects of random factors on the process of automatic scanning, and examples of existing optimalizing control systems. Some of the more interesting communications and observations made during the discussion of the various conference papers have also been included in the Transactions. Personalities and references accompany most of the papers.

Gitis, E.I. (Moscow). Suggestions for the Classification of Analog-to-Digital Converters 323
There is 1 Soviet reference.

Mikhaylov, I.I. (Gorlovka, Stalinskaya Oblast'). Transmitter of the Angle of Rotation of a Multiturn Axle 326
The author describes the transmitter according to the author's certificate issued in his name. There is 1 Soviet reference.

Karnachayev, Yu.I., N.A. Kolesnikova, and Yu.N. Prozorovskiy (Moscow). High-Speed Electric Vacuum Devices Converting Continuous Data Into Discrete and Vice Versa for Use in Wideband Systems of Communication Transfer With Pulse-Code Modulation 329
The authors describe coding, decoding, and regenerating cathode-ray devices used in pulse-code modulation systems. There are 5 references: 2 Soviet and 3 English.

Yermilov, B.I. (Leningrad). Some Types of Digital Function Generators 339
The author investigates the structure of a square-law function generator and of a pulse device for extracting square roots. There are 6 references: 2 Soviet and 4 English.

Yermilov, B.I.

9,7000

B/123/61/000/009/016/027
A004/A104

AUTHOR: Yermilov, B. L.

TITLE: Digital analogs

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1961, 19, abstract 9D135 ("Sb. rapot po vopr. elektromekhan. In-t elektromekhn. AN SSSR", 1960, no. 4, 202-213)

TEXT: It is pointed out that digital analogs combine the high precision of digital computors with the rapid action of mathematical models and are, above all, employed in carrying out individual mathematical operations. They are digital analogs of computers of continuous action. They are characterized by the fact that the preparation for the solution of the problem is carried out by methods used in continuous-action computers instead of digital coding methods. The rating of errors is effected by digital methods. The author analyzes the execution of an operation of raising to a square a variable magnitude with numerical pulse representation and monotonic character of its variations, and also the extraction of square and cubic roots. For the nonmonotonic variation of variable magnitudes reversible counters are used which register the increment

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Digital analogs

S/123/61/000/009/016/027
A004/A104

B

signs, the absolute magnitude of which is transmitted over several channels or on one channel but in different ways. The author enumerates the fields of application of digital analogs.

G. Flidlider

[Abstractor's note: Complete translation]

Card 2/2

1.7000 also 1013, 1031

27978
S/194/61/000/004/010/052
D249/D302

AUTHOR: Yermilov, B.L.

TITLE: Some types of functional digitizers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 4, 1961, 21, abstract 4 B159 (V sb. Teoriya i primeneniye diskretn. avtomat. sistem, M., AN SSSR, 1960, 339-351)

TEXT: Program control of milling machines is considered. The control device consists of the pulse generator, adder and variable division-ratio pulse count divider. A description is given of the squaring and square root-extraction devices, the latter consisting of a pulse generator, two counters with their gating circuits, delay line, etc. The control device is set for obtaining functions of the type $y = a^2 - (a - x)^2$. The reversible polarity counter takes into account the sign of the increments of the variables. By replacing one of the adders with the subtracter, relations of the type

Card 1/2

Some types of functional digitizers

$y = \sqrt{a - x}$ can be obtained. More complex functions can be simulated by combining in succession the devices described, e.g. the successive connection of the squaring and square-root extracting devices produces the solution to the equation of the circle, $y = \sqrt{r^2 - x^2}$. 13 figures. 6 references. [Abstracter's note: Complete translation]

Card 2/2

16,6000

S/044/61/000/008/039/039
C111/C333

AUTHOR: Yermilov, B. L.

TITLE: Digital analogoues

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1961, 50-51, abstract 8V305.("Sb. rabot po vopr. elektromekhan. In-t elektromekhan. AN SSSR", 1960, vyp 4, 202-213)

TEXT: It is mentioned that a high velocity and exactness of the calculations is demanded for the application of computing machines in systems of automatic control. In the last years, digital analogues of the continuously operating computing instruments are developed, whereby the representation of the variables with the aid of pulse count and code pulse is used. The non-linear functional transformations are realized in the digital analogues on the basis of methods of numerical integration. The author considers a number of digital analogues for operations: a digital analogues for the quadrature of the variable $x(t)$; an analogue realizing the operation $y = a^2 - (a-x)^2$; a digital analogue for extracting the square root, an analogue for extracting the cubic root. Furthermore, the principle of the union of operational digital analogues for the performance of complicated function opera-

Card 1/2

S/044/61/000/008/039/039
C111/C333

Digital analogues

tions is considered. The author directs to the good chances for the use of digital analogues in automatic control systems in practice, among them for program controls for metal shearing workbenches.

[Abstracter's note: Complete translation.]

Card 2/2

31014
S/573/61/000/005/004/023
D201/D305

9.7100

AUTHORS: Yermilov, B.L., and Radchenko, A.N.

TITLE: Digital analogues using shift registers with logic feedback

SOURCE: Akademiya nauk SSSR. Institut elektromekhaniki. Sbornik rabot po voprosam elektromekhaniki. no. 5, Moscow, 1961. Avtomatizatsiya, telemekhanizatsiya i priborostroyeniye, 39 - 53

TEXT: In the present article, the method is considered of synthesizing digital analogues which, being slow in their operation, permit a decrease substantially, in the power consumption and their overall dimensions and an increase somewhat in their reliability. For the computing unit it is proposed using a shift register with feedback logic. The input of the computing bloc consists of shift pulses, its capacity being determined by the logic structure of the feedback. A register with feedback may perform integration and other operations by means of a unitary code; thus the necessary re-

Card 1/4

Digital analogues using shift ...

quirement in digital analogues with logic feedback is the transformation of a ring code into a unitary one. The basic computing unit consists of two manitypes of registers with logic feedback as shown in Fig. 1 A and B. In circuit A the feedback is formed by the logic of

$$\psi_A = a\bar{d} + \bar{a}d$$

and in that of circuit B by

$$\psi_B = \bar{a}b + a\bar{b}(c + d).$$

The register B is the reverse of A, with a period of 15. The two registers are connected together to form the basic element of a digital analogue. The first takes the role of an integrator, producing data in a ring code, the second - acts as a decoder, transforming the ring code into the unitary one. Squaring and taking of the square roots are discussed with the example of reproducing the function $z = x^2$ for squaring and $z^2 - x = 0$ for the square root. Their solution lead to the bloc diagrams of Fig. 4a and 4b, using the same register circuits as shown in Fig. 1 with delay lines between

Digital analogues using shift ...

the stages. The maximum value of the input variable is stated to be $x_{max} \leqslant \frac{m+1}{2}$ for both analogues, where m is the capacity of the register. The digital analogue described may also reproduce sine and cosine functions as the result of solving the equation $d^2y/dt^2 + y = 0$ with initial conditions $t_o = 0$, $y_o = R$ and $x_o = 0$, where $x = dy/dt$. The solution of this equation is

$$\left.\begin{aligned} x &= R \sin t, \\ y &= R \cos t, \end{aligned}\right\} \qquad (13)$$

which corresponds in the plane xy to the equation of a circle with the center at the origin $x^2 + y^2 = R^2$. Practical recommendations are also given on the capacity of registers, the methods of their interconnections etc. There are 8 figures, 3 tables and 5 Soviet-bloc references.

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31014
S/573/61/000/005/004/023
D201/D305

Digital analogues using shift ...

Fig. 1.

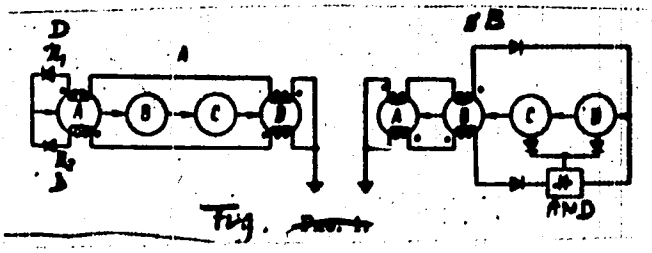

Fig. Черт. 1г

Fig. 4.

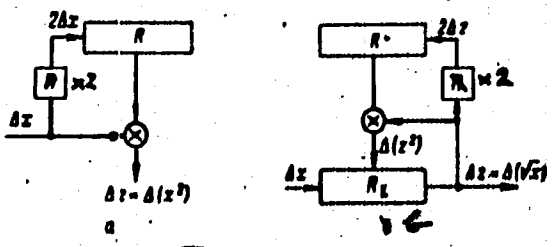

Fig. Черт. 4.

Card 4/4

16.6800 (1121, 1327, 1329)

32590
S/569/61/003/000/009/011
D201/D305

AUTHORS: Voronov, A.A., Yermilov, B.L., and Sokolov, G.N. (USSR)

TITLE: Certain problems of synthesis and analysis of digital automatic control analogues

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Statisticheskiye metody issledovaniya. Teoriya struktur, modelirovaniye, terminologiya, obrazovaniye. Moscow, Izd-vo AN SSSR, 1961, 407 - 420

TEXT: The author analyze the following types of function generators: 1) Generation of polynomials. The prototype of this digital analogue may be said to be the circuit of a continuous analogue, with series connected r + 1 integrators. With a $y^{r}(o)$ = const. input, such a circuit generates a polynomial of t of the r-th degree, whose coefficients depend on the initial values of integrands. By adding a feed-back, an arrangement may be obtained for reproducing

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the inverse function $y = \sqrt[n]{x}$. 2) Generation of function Axy + Bx + + Cy. This problem may be solved using the circuit of B.L. Yermilov for multiplication by each other of two variables (Fig. 2). 3)Generation of circles. The example of digital analogue as evolved by G. N. Sokolov (Fig. 3) is considered. The generation of a circle may also be obtained by the method of B.L. Yermilov. This circuit (Fig. 4) solves

$$y = \sqrt{R^2 - x^2} . \qquad (19)$$

It is of interest in that the error, due to limiting the digits, does not exist. The cct is actually a combination of the squaring and root extracting circuits suggested by B.L. Yermilov and V.V. Semenov. The circuits described show how, from given properties of a problem, a substantial simplification of circuit and its number of components may be obtained. There are 2 tables, 5 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Anon. Computing machines. Mech. Eng., v. 73, p. 325-327, Apr. 1951; R.E. Sprague, Mathem. Tables and other Aids to Computation, no. 37, p.41-49,

YERMILOV, B.L.

Algorithm of a digital device for reproducing equidistant curves. Sbor. rab. po vop. elektromekh. no.9:66-70 '63. (MIRA 17:2)

ACC NR: AP6025656 SOURCE CODE: UR/0413/66/000/013/0108/0109

INVENTOR: Yermilov, B. L.

ORG: None

TITLE: A device for division of two variables given in the form of increments. Class 42, No. 183488 [announced by the Institute of Electromechanics, State Committee on Electrical Engineering, State Planning Commission SSSR (Institut elektromekhaniki Goskomiteta po elektrotekhnike pri Gosplane SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 108-109

TOPIC TAGS: flip flop circuit, computer component, arithmetic unit

ABSTRACT: This Author's Certificate introduces a device for division of two variables given in the form of increments. The unit contains two digital integrators and an adder. To simplify the circuit, make the process reversible and ensure high accuracy in the result, the installation contains single-register integrators for the quotient and divisor with corresponding code transmission circuits, a cumulative adder, flip-flop and four diodes. The outputs of the code transmission circuits for the quotient and divisor are connected to the code inputs of the adder which accumulates the difference between the dividend and the product of the quotient by the di-

Card 1/3

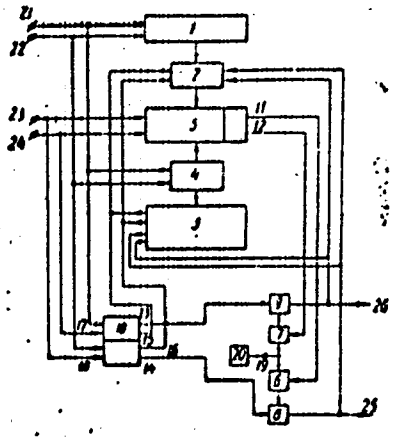
UDC: 681.142.07

visor. The one and zero states of the sign digit in the adder are connected to the first inputs of the first and second diodes respectively, while the second inputs of these diodes are connected to an external pulse generator. The outputs of the first and second diodes are connected to the first inputs of the third and fourth diodes respectively, while the second inputs of these diodes are connected to the inverse and direct potential outputs of the flip-flop respectively. The direct and inverse pulse outputs of this flip-flop are connected to the inputs of the quotient register and divisor code transmission circuit. Also connected to these inputs are the outputs of the third and fourth diodes. The set terminal of the flip-flop is connected to the input for positive increments in the divisor and negative increments in the dividend. The reset terminal of the flip-flop is connected to the opposite inputs for these increments.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001962810013-0"

ACC NR: AP6025656

1 and 2--register and transmission circuit for divisor code; 3 and 4--register and transmission circuit for quotient code; 5--adder; 6-9--first, second, third and fourth diodes respectively; 10--flip-flop; 11 and 12--one and zero states of the sign digit in the adder; 13 and 14--direct and inverse potential outputs of the flip-flop; 15 and 16--direct and inverse pulse outputs for the flip-flop; 17 and 18--flip-flop set and reset terminals; 19--terminal connected to external pulse generator 20; 21 and 22--inputs for positive and negative increments in the divisor; 23 and 24--iputs for positive and negative increments in the dividend; 25 and 26--outputs for positive and negative increments in the quotient



SUB CODE: 09/. SUBM DATE: 26Jul65

Card 3/3

BERESHCHINOV, A.M., gornyy inzh.; YERMILOV, A.V.

Improvement of boring and blasting operations in Ufaley open-pit mines. Gor. zhur. no.5:35 My '62. (MIRA 16:1)

1. Ufaleyskiy nikelevyy zavod.
(Nickel mines and mining) (Blasting)

YERMILOV, Boris Pavlovich; ZAKATOV, Petr Sergeyevich; KUTUZOV, Mikhail Mikiforovich; MURAVIN, Mark Mikhaylovich; SAYENKO, Dmitriy Vasil'yevich; TROITSKIY, Boris Vladimirovich; RUDSHTEYN, M.L., redaktor; POVALYAYEV, P.I., redaktor; KUZ'MIN, G.M., tekhnicheskiy redaktor

[Geodesy] Geodeziia. Pod obshchei red. P.S.Zakatova. Moskva, Izd-vo geodezicheskoi lit-ry. Pt. 1. 1954. 519 p. (MLRA 8:7)
(Geodesy)

YERMILOV, D. K.

USSR/Medicine - Infectious Diseases (Veterinary) May 51

"Some Remarks on the STI Vaccine," P. D. Shat'ko, K. I. Plotnikov, K. P. Voroshilov, Veterinarians, D. K. Ermilov, Honored Vet of the Republic

"Veterinariya" Vol XXVIII, No 5, pp 34, 35

Anti-anthrax vaccine STI was found to be reliable prophylactic which confers immunity for 10-12 mo. However, in 1950 forced vaccinations with STI were followed by infection with anthrax and death of some horses and cattle. Weather at time these infections occurred was hot and there was great number of horse flies which are assumed to transmit anthrax. Microscopic exams of smears from carcass of dead animals disclosed noncapsular anthrax bacilli in 47.8% of the cases, while such bacilli were present only in 13% of the cases in corpses of exptl animals infected with initial material.

1B2T77

SHAT'KO, P.D.; KORNILOVA, A.L.; YERMILOV, D.K. [deceased]

Natural foci of rabies in Novosibirsk Province. Zhur. mikrobiol., epid. i immun. 40 no.6:33-38 Je '63.
(MIRA 17:6)

1. Iz Novosibirskoy oblastnoy veterinarnoy bakteriologicheskoy laboratorii.

YERMILOV, A., podpolkovnik.

Signal system for columns of amphibious vehicles on the march.
Voen.-inzh. zhur. 101 no.5:23 My '57. (MLRA 10:6)
(Vehicles, Amphibious)

KRECHETOV, V.; YERMILOV, G. (Simferopol')

Headquarters or office? Grazhd. av. 22 no.7:26-27 Jl '65. (MIRA 18:7)

1. Komandir Noril'skogo aviatsionnogo podrazdeleniya (for Krechetov).

YERMILOV, G. A. (ENGR)

Dissertation: "An Investigation of the Process of Hackling With a Small Combing Roller for the Purpose of Determining Its Basic Parameters for the High-Productive Hackle of a Noncarding Machine." Cand Tech Sci, Moscow Textile Inst, 30 Jun 54, Vechernyaya Moskva, Moscow. 22 Jun 54.

SO: Sum 318, 23 Dec. 1954

ZOLOTAREV, Nikolay Il'ich; YERMILOV, Grigoriy Andreyevich; ASTASHEV, A.G., retsenzent; KOPELEVICH, E.A., retsenzent; ISLANKINA, T.F., red.; MEDVEDEV, L.Ya., tekhn.red.

[Machinery for combing cotton] Chesal'nye mashiny dlia khlopka. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 147 p. (MIRA 13:3)
(Cotton machinery)

YERMILOVA, G.I.; KORNEV, A.Ye.; LEVIN, P.I.; LEBEDEVA, I.N.; GRINBERG, A.Ye.; FRISHMAN, T.A.

Effectiveness of some stabilizers in the extrusion of polypropylene films and their aging. Plast. massy no.5:46-49 '65. (MIRA 18:6)

YERMILOV, G. B.

Yermilov, G. B. - "On the interrelationships of plants within a species", (With editorial comment), Yestestvoznaniye v shkole, 1949, No. 2, p. 7-17.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nyikh Statey, No. 20, 1949).

YERMILOV, G. B.

Agriculture

Plant and light, Moskva, Gos. izd-vo sel'khoz. lit-ry, 1952.

Monthly List of Russian Accessions. Library of Congress October 1952 UNCLASSIFIED

YERMILOV, G.B.

Seeds -- Dissemination

Dissemination and concentration of seeds

Dokl. AN SSSR 84,No. 3, 1952
rcd. 2 Dec. 1949

SO: Monthly List of Russian Accessions, Library of Congress, Sept. 1952 [redacted], Uncl.

ERMILOV, G. B.

USSR/Agriculture - Plant Physiology

Card : 1/1

Authors : Ermilov, G. B.

Title : Effect of the short day on the growth and cold resistance of red clover

Periodical : Dokl. AN SSSR, 96, Ed. 5, 1061 - 1064, June 1954

Abstract : The experimental material shows that the growth of clover plants during a day time cycle of less than 12 hours leads to a decrease in clover harvest in the following year. The growth of clover plants during short days results in reduction in the number of winter plants and reduces the possibility of the buds and stalks on the plant to grow again. Seven references. Tables.

Institution : Acad. of Sc. USSR, Ural Branch, Biological Institute

Presented by : Academician, A. L. Kursanov, March 16, 1954

YERMILOV, G.B.; ZABLUDA, G.V., professor, otvetstvennyy redaktor

[Biological principles in sowing red clover] Biologicheskie osnovy poseva krasnogo klevera. Sverdlovsk, Akademiia nauk SSSR, Ural'skii filial, 1956. 72 p.
(Clover) (MLRA 9:11)

YERMILOV, G.B.

Productivity of corn leaves in the Non-Chernozem zone [with summary in English]. Fiziol. rast. 4 no.6:542-547 N-D '57. (MIRA 10:12)

1. Institut biologii Ural'skogo filiala AN SSSR, Sverdlovsk.
(Corn (Maize)) (Leaves)

YEREMILOV, G.Z.

Water cycle of germinating red clover seeds [with summary in English]. Fiziol. rast. 5 no.3:245-252 My-Je '58. (MIRA 11:6)

1. Ural'skiy filial Akademii nauk SSSR, Sverdlovsk.
(Clover)
(Germination)
(Soil moisture)

YAKHILOV, G.B.

Experimental school fields on collective farms and state farms.
Politekh. obuch. no.9:39-41 S '58. (MIRA 11:10)
(School gardens)

YERMILOV, G.B.

Interrelationships of Trifolium sativum (Crome) plants during their first year of life. Bot.zhur. 43 no.11:1633-1638 N '58. (MIRA 11:11)

1. Ural'skiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva, Sverdlovsk.

(Clover) (Plants, Space arrangement of)

YERMILOV, G. B.

AUTHOR: Yermilov, G. B. 20-3-52/59

TITLE: On the Problem of the Physiology of Plant Flowering (K voprosu o fisiologii tsveteniya rasteniy).

PERIODICAL: Doklady AN SSSR, Vol. 118, Nr 3, pp. 598-600 (USSR), 1958

ABSTRACT: The transition of the plants from the vegetative stage to flowering and the conditions of this transition had since a long time attracted attention. However, the importance of the individual characteristic features of the plants itself has hitherto been taken into account only to a small extent especially the influence of these properties which depend on the seed quality has been researched little. The seeds, however, are never equal within the range of an ear or of a grain (references 1,2). The author observed the consequences of the characteristic features of the seeds on the details of flowering in seeds of various ripeness. 5 maize sorts were sowed and the seeds were gathered a) at the begin of , and b) during the stage of milk ripeness, and c) during the stage of growth ripeness. All these seeds had a much lower weight than normally matured seeds (table 1). The imperfect development of the seeds

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prevented neither the good development of the crop nor the development of completely normal plants from them. The differences in germination amounted to 2 days at most. The equality of the plants before the harvest is shown in table 2. Since the summer of 1956 was cool the flowering of even the earliest sorts began only in the end of July. Table 3 shows that the time of flowering of male as well as of female inflorescences is to a great extent influenced by the maturity of the seeds. The flowering began 4-12 days sooner in the case of plants from more mature seeds and took a more uniform course. The plants from less ripe plants were taller. This shows indirectly their slower generative development (table 2). The above mentioned results show that the degree of ripeness of the seed does not exercise any considerable influence on the growth of the vegetative parts of maize plants (references 4,5). The mentioned influence on the begin of flowering is only possible if plants from seeds of different degrees of ripeness react differently to one and the some environmental conditions, in other words, if their metabolism takes a somewhat different course. Furthermore it can be concluded from the results that the not simultaneous flowering which can always be observed

under field conditions can be explained not only by the differences of the microconditions of growth, but also by the individual characteristic features of the seeds from which the plants are grown, especially by the degree of ripeness of the first. This might be one of the reasons of the long known importance of using greater and equal seeds (reference 6) for sowing. Here not only the greater stock of substance, but also the evenness of the seeds with respect to the development of the embryo and to the overall maturity as well as with respect to the capability of a more uniform reaction to the environmental conditions can play a rôle, especially to the conditions which determine the development processes. The influence of the individual characteristic features of the seeds must be taken into account in physiological experiments concerning their flowering. Especially the influence of the state of the seeds (of their ripeness and chemical composition) must be taken into account in the study of the conditions which are important for the development of the plants.

On the Problem of the Physiology of Plant Flowering 20-3-52/59

There are 3 tables, and 6 references, all of which are Slavic.

ASSOCIATION: Institute for Biology of the Ural Branch AN USSR (Institut biologii Ural'skogo filiala Akademii nauk SSSR)

PRESENTED: August 23, 1957, by A. L. Kursanov, Academician

SUBMITTED: August 20, 1957

AVAILABLE: Library of Congress

Card 4/4

YERMILOV, G.B., kand.biolog.nauk, starshiy nauchnyy sotrudnik; GREBNEV, B., red.; PAL'MINA, N., tekhn.red.

[Red clover] Krasnyi klever. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1959. 120 p. (MIRA 14:3)

1. Ural'skoye otdeleniye Nauchno-issledovatel'skogo instituta sel'skogo khozyaystva (for Yermilov).
(Clover)

YERMILOV, G.B.

Biological differences in corn varieties. Fiziol.rast. 6 no.3: 361-362 My-Je '59. (MIRA 12:8)

1. Ural Scientific Research Agricultural Institute, Sverdlovsk.
(Corn (Maize)--Varieties) (Plants--Transpiration)

YERMILOV, G.B. (Sverdlovsk)

Method of observing the growth of the corn plant. Bot.zhur. 44 no.6:805-807 Je '59. (MIRA 12:11)
(Corn (Maize)) (Growth (Plants))

17(4),30(1)

AUTHOR: Yermilov, G. B. SOV/20-125-2-52/64

TITLE: On the Water Balance of Germs During the First Days of Their Life (O vodnom rezhime prorostkov v pervyye dni ikh zhizni)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 420-423 (USSR)

ABSTRACT: The period from seed germination to the appearance of the germ on the surface belongs to the most critical periods in the life of plants (Ref 1). The physiology of germination and the environmental influence on this stage, however, belong to the most unsatisfactorily investigated problems (Refs 2,7). In order to study the aforesaid problem, the author applied Fil'ter's principle (according to reference 2). The seed swelling ceased in a certain stage which corresponded to the water amount assimilated by the seed or consumed by the germ. Seeds of summer wheat "Moskovka", local summer vetch, peas "Kapital" and Indian corn VIR-42 were sown in glasses with sand in a depth of 5 cm. Tap water in quantities of 5, 7, 9, and 11 % of the total capacity of humidity was filled in and no water was added afterwards. As soon as equilibrium between the water in the sand and in the seed or germ had

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been established after 8-10 days, the germs were taken out, sorted and divided into three parts: cotyledons (endosperm), germ (coleoptiles), and root. The seed (appearance of the root) begins to germinate as soon as the seed has attained a certain degree of saturation with water (Table 1). It is not the absolute assimilated quantity of water which is determining in this respect, but the degree of saturation. It may be expressed by the water content in % of the absolute dry weight of the seed. In the case of the vetch it amounts to ~110 %, with peas it is 85 %, with Indian corn it is 38 %, with wheat it is 57 %. In the case of water lack the small seeds will germinate first since they will have attained the necessary degree of saturation more rapidly with the same assimilated quantity of water. The cotyledons and the endosperm are important to the water supply of the root and germ during the first days of life. The quantity of water assimilated until the moment when the germ appears is insufficient for the growth of the latter (Table 2). The newly assimilated water is conveyed primarily into the germ (coleoptiles) and is concentrated there (Table 3). Figures 1, 2, and 3 show

the dependence of the growth of roots and germs on the quantity and content of water contained in them. With the growth of coleoptiles the ratio of growing and mature parts varies (Table 4). Table 5 shows the dependence between the water balance of coleoptiles and the particularities of growth of their individual parts. The length is closely connected with the water balance. The length depends less on the saturation of the germs. In the case of vetches and peas the length of germs depends to a certain extent on the saturation of cotyledons, which does not hold for Indian corn. The length of the root depends less on the quantity of water and does not depend on the saturation. There is no connection between the saturation of the roots and germs on the one hand and their dry weight on the other (pea, vetch), or there is only a small one (Indian corn). There are 3 figures, 5 tables, and 7 Soviet references.

On the Water Balance of Germs During the First Days of Their Life SOV/20-125-2-52/64

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva (Ural Scientific Research Institute of Agriculture)

PRESENTED: December 9, 1958, by A. L. Kursanov, Academician

SUBMITTED: December 8, 1958

Card 4/4

YERMILOV, G.B.

Some characteristics of the absorption of water by seed corn.
Fiziol.rast. 7 no.1:49-56 '60. (MIRA 13:5)

1. Plant Physiology Laboratory of Ural Scientific Research Agricultural Institute, Sverdlovsk.
(Corn(Maize))

YERMILOV, G.B.

Effect of gibberellic acid on seed germination and seedling resistance in corn. Izv. AN SSSR. Ser. biol. 26 no.1:33-39 Ja-F '61. (MIRA 14:3)

1. The Ural Branch of Academy of Sciences of the U.S.S.R., Sverdlovsk.
(GIBBERELLIC ACID) (CORN (MAIZE))
(GERMINATION)

YERMILOV, G.B.

Effect of the Internal processes in plants on the productivity of corn leaves. Fiziol.rast. 9 no.4:393-397 '62. (MIRA 15:9)

1. Ural'skiy filial Akademii nauk SSSR, Sverdlovsk.
(CORN (MAIZE)) (PHOTOSYNTHESIS)

YERMILOV, G.B. (Tyumen')

Effect of growing conditions on the morphology of corn seedlings.
Bot. zhur. 48 no.4:585-588 Ap '63. (MIRA 16:5)
(Corn (Maize)) (Sowing)

BAIYUZEK, F.V.; BURMISTROV, M.I.; DZUTSOV, N.K.; YERMILOV, V.I.; KARIMOVA, T.V.; SKORIK, V.I.; UVAROV, B.S.; SHANIH, Yu.N.; SHAMARINA, T.N.

Artificial circulation in surgery of the heart and large vessels. Grud.khir. no.4:33-39 Jl-Ag '62. (MIRA 15:10)

1. Iz kliniki khirurgii usovershenstvovaniya vrachey No. 1 (nach. - deystvitel'nyy chlen AMN SSSR prof. N.A.Kupriyanov) Voyenno-meditsinskoy akademii imeni S.M.Kirova. Adres avtorov: Leningrad, K-9, pr. K.Marksa, d. 5/20 Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey No. 1.

(HEART—SURGERY)
(PERFUSION PUMP (HEART)

SKLYAROV, Yu.A.; POLYAKOV, V.M.; YERMILOV, G.P.

Photographic observations of minor planets and of Seki-Lines' comet in Saratov. Biul.Inst.teor.astron. 9 no.8:576 '64.

(MIRA 17:12)

1. Saratovskiy pedagogicheskiy institut i Saratovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva.

ERMILOV, I. Ya. Pa-2133

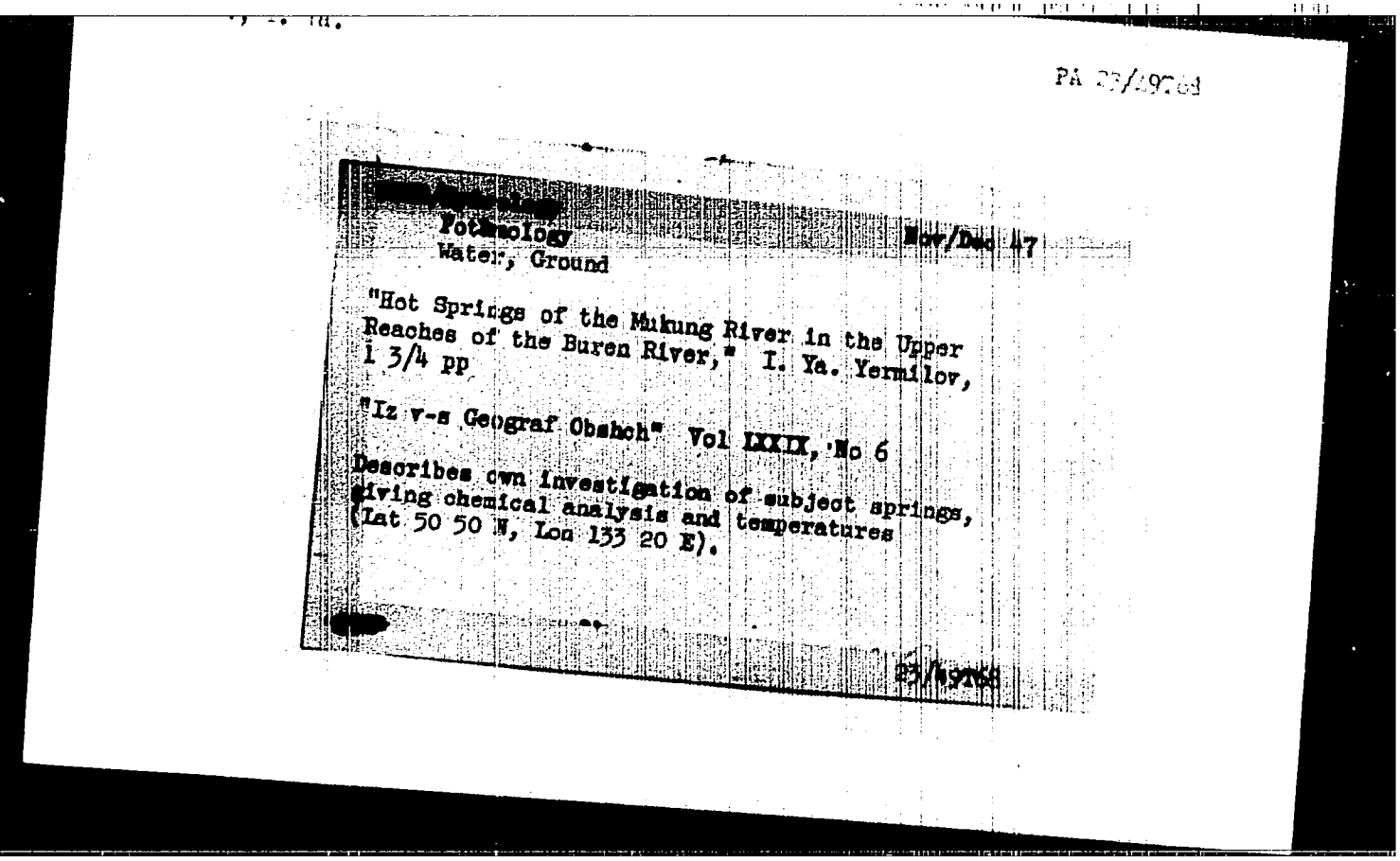
USSR/Arctic Studies - Frozen Soil May/Jun 1946

"Frozen Soil in Bogoslov Region of the Middle Urals," I J Ermilov, 2 pp

"Izv Geog" Vol 78, No 5-6

Number of years soil was frozen at various depths

2133



[redacted]

Pathology Nov/Dec 47
Water, Ground

"Hot Springs of the Mukung River in the Upper Reaches of the Buren River," I. Ya. Yermilov, 1 3/4 pp

"Iz v-s Geograf Obshch" Vol LXXIX, No 6

Describes own investigation of subject springs, giving chemical analysis and temperatures (Lat 50 50 N, Lon 133 20 E).

[redacted]

YERMILOV, I.Ya.

Thermal springs in the Mukungi River Valley on the western slope of the Burein chain. Trudy Lab. Gidrogeol. Problem 3, 301-4 '48. (MLRA 3:2)
(CA 47 no.18:9530 '53)

YERMILOV, I. YA.

PA5/49T39

USSR/Geology
Tectonics
Volcanology

Mar/Apr 48

"Mud Volcano - Akpatlaakh," I. Ya. Yermilov, 1 p

"Iz v-s Geog Obshch" Vol LXXX, No 2

Akpatlaakh, in southwest part of Turkmen SSR, 7 km from Caspian Sea, is largest and most remarkable mud volcano in the region. Height is 90 meters, circumference, 3 km, and base area, 4.5 sq km. Describes appearance in detail. Erupts periodically. Detailed knowledge of its structure would be of importance for the tectonics of the whole area, and possibly of considerable practical significance.

5/49T39

YERMILOV, I. YA.

20569 YERMILOV, I. YA. Formy solovoy akkumulyatsii v solonchakovykh pustynyakh zapadnoy turkmenii. Izvestiya vsesoyuz. geolr. o-va, 1949, vyp. 3, s. 327-33.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva - 1949

YERMILOV, I. Ya.

Method of bringing the static level of mineralized water of drill holes to that of fresh water. Geol.sbor. no.3:245-248 '55. (MLRA 8:6)
(Water, Underground)

YERMILOV, I.Ya.

Original forms of sculptural microrelief on the Mangyshlak Peninsula. Geog.sbor. no.10:172-174 '58. (MIRA 12:1)
(Mangyshlak Peninsula--Geology, Stratigraphic)

YERMILOV, L.P.

Some changes in the blood coagulation system in arteriosclerosis of the coronary arteries of the heart. Kardiologiia 2 no.1:37-43 Ja-F '62. (MIRA 15:5)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni akademika Pavlova.
(BLOOD--COAGULATION) (ARTERIOSCLEROSIS)

YERMILOV, L.P.

Correlation of the level of prothrombin and fibrinogen in the blood plasma in stenocardia and myocardial infarct. Sov.med. 26 no.10:14-17 O '62. (MIRA 15:12)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni I.P.Pavlova.

(PROTHROMBIN) (FIBRINOGEN)
(ANGINA PECTORIS) (HEART--INFARCTION)

3.5000
3.9000

80573
SOV/169-59-7-7197

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 7, p 109 (USSR)

AUTHOR: Yermilov, S.N.

TITLE: On the Problem of the Influence of Advection on the Temperature Distribution Near a Base Surface

PERIODICAL: Tr. Leningr. gidrometeorol. in-ta, 1958, Nr 8, pp 169 - 180

ABSTRACT: The non-stationary problem of air-mass modification under the effect of turbulent mixing along the vertical and temperature transfer along the horizontal by an orderly velocity of wind (advection) is discussed. According to this, the equation of the problem has the form:

$$\frac{\partial \tau}{\partial t} + u\frac{\partial \tau}{\partial x} = \frac{\partial}{\partial z} k(z)\frac{\partial \tau}{\partial z},$$

where: τ is the temperature, t is the time, u is the velocity of wind, directed along the horizontal coordinate axis x, k(z) is the turbulence ratio of thermal diffusivity, which is assumed to be a power function of the altitude z. The velocity of wind u is assumed to be constant. The following data are considered to be

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On the Problem of the Influence of Advection on the Temperature Distribution Near a Base Surface

given as boundary conditions: the temperature at the base surface $z = 0$, the distribution of temperature within the quadrant $x > 0$, $z > 0$ at the initial instant $t = 0$, and the distribution of temperature along the "initial half-ray" $x = 0$. The solution is sought, which is limited for $z = \infty$. The problem in such a formulation was solved earlier by M.Ye. Berlyand (Prediction and control of the thermal regime of the atmosphere layer near the earth surface, Gidrometeoizdat, 1956); who applied the two-fold operational transformation with respect to variables t and x. The same solution is obtained in the present reviewed work, but by an other method and accordingly in an other form. Namely, the author following the idea and guidance of D.I. Laykhtman after having used the operational transformation with respect to variable t, employed the integral Gruenberg transformation with respect to variable z. In consequence, the author obtains the solution composed by simple and double integrals, and some of the quadratures must be carried out in the complex range according to the Riemann-Mellin-formula. The interpretation of a series of interesting special cases is original in the work. In section A the author discusses the event when the temperature of

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On the Problem of the Influence of Advection on the Temperature Distributed Near a Base Surface

the base surface does not vary in time. In this case the solution is represented by a degenerated hypergeometric function. The computations are performed for three particular subcases:

I $k_o = 0.2\ m^2/sec$, $u = 2\ m/sec$

II $k_o = 0.3\ m^2/sec$, $u = 2\ m/sec$

III $k_o = 0.3\ m^2/sec$, $u = 5\ m/sec$

(k_o is the value of the ratio of the turbulent thermal diffusivity at an altitude of 1 m). It is shown that the thickness of the boundary layer is greater for higher values of the turbulence ratio (case II relatively to I) and for lesser velocities of wind (case II relatively to III). For the subcase I the variation of the turbulent heat current along the horizontal is plotted; this current decreases with an increase in the distance from the initial line $x = 0$, and the decrement rate diminishes with an increase of x. In section B the event is investigated when the temperature of the base surface is not depending on x and varies discretely in time.

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On the Problem of the Influence of Advection on the Temperature Distribution Near a Base Surface

The author assumes that the temperature on the surface $z = 0$ is equal to some constant value different from the initial value during a certain interval of time $t_1 < t < t_1 + \Delta$, but during the rest of the time it is equal to the initial value. In this case the solution is expressed by a degenerated hypergeometric and incomplete function. For this case, the detailed computation of one example is performed, which makes it possible to trace how the temperature at the various altitudes and various distances follows the temperature variation in the base surface. Particularly, it is ascertained that the influence of the variations of the temperature in the base surface extends practically to small altitudes: Already at the 200 m level this influence is hardly noticeable. In so far as the real variation of the temperature in the surface $z = 0$ can be approximated by a multitude of discrete variations, so the given example has also methodical significance.

L.S. Gandin

Card 4/4

SOV/169-59-6-6016

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 88 (USSR)

AUTHOR: Yermilov, S.N.

TITLE: On the Interconnected Transformation of Temperature and Humidity Fields in the Layer of Atmosphere Near the Ground

PERIODICAL: Uch. zap. Ivanovsk. gos. ped. in-t, 1958, Vol 18, pp 231 - 244

ABSTRACT: The temperature and humidity variation in a moving air mass is described by a known system of differential equations and the formal solution of this system is performed. The author proposes some simplification of the obtained formulae for a special case of the problem in question, assuming the variations of temperature and humidity to proceed in jumps. The calculation results of one example are cited.

M.Ye. Berlyand

Card 1/1

YERMILOV, S.N., Cand Phys-Math Sci (diss) Certain questions of the theory of the transformation of Air masses in the near ground layer of the atmosphere." Leningrad, 1960, 12 pp (Main Geophysical Observatory im A. I. Voyeykov) (KL, 34-60, 119)

YEFIMILOV, S.N.

Temperature-field transformation above an inhomogeneous underlying surface. Trudy Len.gidromet.inst. no.18:184-190 '63. (MIRA 18:1)

Temperature-field transformation and moisture above an inhomogeneous underlying surface. Ibid.:191-201

DUNIN-BARKOVSKIY, Lev Valerianovich; GELLER, S.Yu., doktor geograf. nauk, red.; YEMILOV, L.T., red.; PECHERKIN, I.V., tekhn.red.

[Physicogeographical principles of planning irrigation systems; zoning and water balance of the irrigated territory] Fiziko-geograficheskie osnovy proektirovaniia orositel'nykh sistem; raionirovanie i vodnyi balans oroshaemoi territorii. Pod red. S.IU.Gellera. Moskva, Izd-vo M-va sel'skogo khoz.SSSR, 1960. 166 p. (MIRA 13:8)

(Irrigation)

MERENOV, Igor' Vladimirovich; SHMUKER, Anatoliy Lazarevich; YERMILOV, L.T., kapitan 2 ranga, red.; KALACHEV, S.G., tekhn. red.

[Inflatable lifesaving apparatus for use at sea] Naduvnye spasatel'nye sredstva na more. Moskva, Voenizdat, 1963. 101 p. (MIRA 16:7)

(Lifesaving apparatus)

BOGDANOV, Arkadiy Mikhaylovich; YERMILOV, L.T., red.

[Cargo transshipment to ships at sea] Peredacha gruzov korabliam na khodu. Moskva, Voenizdat, 1964. 92 p.
(MIRA 18:1)

GORDEYEV, Leonid Ivanovich; ZAKOLODYAZHNYY, Vitaliy Ivanovich; SUVOROV, Yevgeniy Fedorovic ; FUFAYEV, Vadim Alekseyevich; CHUROV, Yevgeniy Petrovich; YERMILOV, L.T., red.

[Space beacons in navigation] Kosmicheskie maiaki v navigatsii. Moskva, Voenizdat, 1964. 201 p. (MIRA 17:9)

KABOZOV, S., kand.sel'skokhoz.nauk; TARASINSKIY, G.; YERMILOV, N.

Using synthetic urea and manganese in mixed feeds. Muk.-elev. prom. 25 no.7:21-22 Jl '59. (MIRA 12:11)

1. Glavnyy inzhener Orenburgskogo kombikormovogo zavoda (for Tarasinskiy). 2. Nachal'nik otdela tekhno-khimicheskogo kontrolya (for Yermilov).
(Feeds) (Urea) (Manganese)

Yermilov, N.

PETROVSKIY, A., nauchnyy sotrudnik; TARASINSKIY, G., inzhener; YERMILOV, N., inzhener.

Measuring out components of mixed feeds. Muk.-elev. prom. 22 no.8: 22-25 Ag '56. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki (for Petrovskiy). 2. Chkalovskiy kombikormovyy zavod (for Tarasinskiy and Yermilov).
(Feeding and feeding stuffs)

YERMILOV, M.A.; SEMENOV, G.M.

Improve planning of shop work. Sbor.der.transp. 36 no.12:69-71 D '56. (MLRA 10:2)

1. Sekretar' partiynogo komiteta parovoznogo depo Ulan-Udskoy Vostochno-Sibirskoy dorogi (for Yermilov). 2. Glavnyy bukhgalter depo Ulan-Udskoy Vostochno-Sibirskoy dorogi (for Semenov).
(Locomotives--Repairs)

SOV/124-57-4-4454

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 84 (USSR)

AUTHORS: Milin, V. B., Yermilov, N. D.

TITLE: The Effect of Turbulence on the Conductivity of Air Under the Action of Electric Fields (Vliyaniye turbulentnosti na provodimost' vozdukha pod vozdeystviyem elektricheskikh poley)

PERIODICAL: Uch. zap. Kirovskiy ped. in-t, 1954, Vol 1, Nr 8, pp 21-28

ABSTRACT: A presentation and analysis of the results of special experiments on the artificial ionization of atmosphere performed primarily in order to study the effects of turbulent mixing on the electrical conductivity of the atmospheric surface layer. The method of artificial ion dissemination is suitable for the evaluation of the turbulent exchange coefficient in the surface layer of the atmosphere: A definite relationship exists between the turbulent exchange coefficient (with a given stratification of the ground layer) and the ratio between the conductivity values of two levels situated at an equal distance from a linear ion source. Similar experiments carried out in 1954 demonstrated that the turbulent exchange coefficients determined on the basis of ion-disseminator data and gradient observations have fairly close values and

Card 1/2

The Effect of Turbulence on the Conductivity of Air Under the Action (cont.)

exhibit a consistent behavior in the course of different experiments. Apparatus employed for the artificial ion-dissemination and the measurement of conductivity is described. Experiments were also conducted with a plane (vertically arranged) source of ions.

L. S. Gandin

Card 2/2

YERMILOV, N.D.

USSR/Physics of the Atmosphere - Atmospheric Electricity, M-

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36201

Author: Yermilov, N. D., Krasnov, B. I.

Institution: None

Title: Certain Refinements to the Theory of the Vertical Distribution of the Intensity of the Atmospheric Electric Field in Normal Days

Original Periodical: Uch. zap. Kirovskovo ges. ped. in-ta, 1955, No 9, 171-182

Abstract: An analysis is made of the variation of the intensity of the electric field with altitude in days characterized by weak winds and insignificant cloudiness in the absence of precipitation. This problem is solved under the following [redacted]. 1. The entire atmosphere is arbitrarily divided into a surface layer and the free atmosphere. 2. In the surface layer the electric conductivity is constant, and in the free atmosphere it varies exponentially $\lambda_z = \exp[\alpha(z-H)]$, where λ_z is the electric conductivity at altitude z, α a constant characterizing the variation of λ with altitude,

Card 1/2

USSR/Physics of the Atmosphere - Atmospheric Electricity, M-

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36201

Abstract: and H is the height of the surface layer. 3. The coefficient of turbulent mixing k(z) varies linearly with altitude in the surface layer $k(z) = k_1 z$, and remains constant outside the surface layer $k(z) = k_1 H$. 4. Under normal conditions the one-dimensional Poisson equation $d^2v/dz^2 = -4\pi\rho$ holds at any altitude (v is the potential of the electric field and ρ is the charge density). 5. At the boundary between the surface layer and the free atmosphere, the distribution of the space charge has no extremum, i.e., $d\rho/dz \neq 0$. Under these conditions, the following equations are determined for the variation of the field intensity with altitude:

$$y(z) = \frac{\pi\sqrt{2\delta}H^{-D}}{\Delta}\left[(\sqrt{\delta}+1)D\sqrt{z}K_1(D\sqrt{z}) - (\sqrt{\delta}-1)H^{-2D}D\sqrt{z}I_1(D\sqrt{z})\right]\ldots$$

$$y(z) = \frac{2y_0H^{-D}}{\Delta}\exp\sqrt{\alpha}(H-z)\left[1 + \frac{\exp\sqrt{\alpha}(H-z)}{\ldots}\right].$$

Here y(z) and y_0 are the field intensities at altitude z and at the earth's surface; K_1 and I_1 are the McDonald and Bessel functions; $D = 4\sqrt{\pi\lambda/k_1}$; $\Delta = 2\delta H^{-D} + \sqrt{\delta} + 1$, and $\delta = 4\pi\lambda/k_1H^2$. These relationships can be used to determine the coefficient of turbulence.

Card 2/2

AUTHORS: Yermilov, N. G., Technician SOV/91-59-2-22/33

TITLE: A Device for the Impregnation of Wood under Local Conditions (Ustanovka dlya propitki drevesiny v mestnykh usloviyakh)

PERIODICAL: Energetik, 1959, Nr 2, pp 29 - 31 (USSR)

ABSTRACT: The author describes a diffusion impregnation process of wood with creosole oil by a locally constructed (at a cost of 2,500 rubles) impregnating device. Impregnation of one wood item took 60 - 70 min. The depth of penetration of the antiseptic reached 25 - 35 mm. Two workers operating the device impregnated 2m^3 of wood per workday. There are two photos and 1 diagram.

Card 1/1

SHEVELEV, Aleksey Petrovich; KUZNETSOV, P.V., red.; YEMELOV, N.G., spetsred.; POKSHAREVA, A.A., tekhn.red.

[Precast construction and its economic effectiveness] Sbornoe stroitel'stvo i ego ekonomicheskaia effektivnost'. Moskva, Gosplanizdat, 1960. 157 p. (MIRA 13:7)
(Precast concrete construction)

YERMILOV, M.G., tekhnik

Switching point instead of a dead spur line on a 35 kv. electric transmission line. Energetik 8 no.7:33 Jl '60. (MIRA 13:8)
(Electric power distribution)

YERMILOV, N.G., tekhnik

Melting of ice from the lightning protection lines of 110 kv. overhead electric power transmission lines. Energetik 10 no.1:23-24 Ja '62. (MIRA 14:12)
(Electric lines--Overhead)

ANICHKOV, M.N. (Leningrad, Mokhovaya ul.,d.28,kv.26); BALYUZEK, F.V.; BURMISTROV, M.I.; PISAREV, Yu.F.; YERMILOV, N.I.

Resection and transplantation of a segment of the arch of the aorta with its branches (the carotid and subclavian arteries). Grud. khir. 3 no.1:9-13 Ja-F '61. (MIRA 16:5)

1. Iz khirurgicheskoy klinniki dlya usovershenstvovaniya vrachey No.1 (nachal'nik - deystvitel'nyy chlen AMN SSSR prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(CAROTID ARTERY--SURGERY) (SUBCLAVIAN ARTERY--SURGERY)
(AORTA--SURGERY)

BALYUZEK, F.V., kand.med.nauk; SHANIN, Yu.N., kand.med.nauk;
BUNNISTROV, M.I.; YERMILOV, N.I.; KARIMOVA, T.V.

Use of extracorporeal circulation in experimental open heart surgery. Vest.khir. 87 no.11:24-30 N '61. (MIRA 15:11)

1. Iz 1-y khirurgicheskoy kliniki usovershenstvovaniya vrachey i kafedry anesteziologii (nach. - prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.
(PERFUSION PUMP (HEART))

OTCHENASHENKO, I.M.; NEYMARK, V.M.; YERMILOV, N.K.; YEGOROV, B.N.

Volume microdilatometer for investigating phase transitions.
Zav. lab. 29 no.10:1260-1261 '63. (MIRA 16:12)

1. AN SSSR i Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova.

S/076/62/036/001/011/017
B124/B110

AUTHORS: Yegorov, B. N., Yermilov, N. K., and Otchenashenko, I. M.

TITLE: New thermal setup for phase analysis of small specimens

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 1, 1962, 170-175

TEXT: A new setup securing uniform heating and cooling over a wide temperature range at an adjustable rate is described. The setup, designed for use in thermal analysis, was developed at the Design Office mentioned under Association. A block diagram, including a thermal block (Fig. 2), temperature control equipment, an ЭР-С-К (ER-S-K) electronic controller furnished by the factory "Komega", and an СН-120 (SN-120) voltage regulator, is shown in Fig. 1. Uniform temperature changes over the range from -150 to 350°C at rates between 0.1 and 6.4°/min can be obtained The thermal block is an enclosed all-metal stainless steel chamber with its upper flange 4 fastened to bearing disk 3. A platinum thermocouple 13 is provided at the bottom to control the temperature within the block. Further components of the thermal block are: electrical heater 15, metallic holder 2, heat reflectors 5, and measuring rod 9. All thermal

Card 1/2

LEVCHENKO, D.N.; YERMILOV, A.S.; TEPLYKH, G.A.; VOLOBUYEV, N.K.

Use of ultrasound for deemulsifying stable petroleum emulsions. Prim. ul'traakust. k issl. veshch. no.14:337-343 '61. (MIRA 14:12)
(Ultrasonic waves--Industrial applications) (Emulsions)

L 42209-66 EWT(m)/T DJ/WE/GD

ACC NR: AT6013184 (N) SOURCE CODE: UR/0000/61/000/000/0337/0343

AUTHORS: Levchenko, D. N.; Yermilov, A. S.; Teplykh, G. A.; Volobuyev, N. K. 46 43 B+1

ORG: none

TITLE: Application of ultrasound in de-emulsification of stable oil emulsions 11 12

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k issledovaniyu veshchestva, no. 14, 1961, 337-343

TOPIC TAGS: ultrasound, emulsion, ultrasonic equipment, ultrasonic petroleum purification, ultrasonic vibration emitter, barium titanate / OP-10 de-emulsifier, VNII NP-58 de-emulsifier, KS-59 de-emulsifier

ABSTRACT: De-emulsification by means of ultrasound was studied on stable, aged, oil-water emulsions from traps and storehouses of the Moscow refineries. Three ultrasound generators (3.2 and 0.6 kilowatt capacities) and vibrators (magnetostrictive, barium titanate, flat, and focusing) were employed in the study. The degree of de-emulsification was determined as a function of the height of the sonicated emulsion layer, sonication time, and ultrasound field intensity. It was established that the investigated emulsions can be destroyed when treated with ultrasound with a frequency of 20—750 kHz. The de-emulsification degree increases with increased ultrasound field intensity and time of treatment, and decreases with increased emulsion layer. The sound frequency is inversely proportional to the optimal thickness

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ACC NR: AT6013184

3

of the destroyed emulsion. The most promising vibrators are barium titanate pipes and hydrodynamic vibrators used in conjunction with de-emulsifiers OP-10, VNII NP-58, and KS-59.//Orig. art. has: 2 tables and 8 figures.

SUB CODE: 07, 20, 11/ SUBM DATE: 22Apr61

Card 2/2 af

YERMILOV, A.V., gornyy insh.; ZAGORUYKO, G.K., gornyy insh.

Magnitude of advance in stripping operations at the Ufaley open-pit mines. Gor. shur. no. 12:19-22 D '65. (MIRA 18:12)

1. Ufaleyskiy nikelevyy kombinat.

PRIKHOD'KO, V.V., gornyy inzh.; YERMILOV, A.V., gornyy inzh.

Drainage of the Lake Chernoye deposit with water level reduction wells. Gor. zhur. no.7:23-24 Jl '61.
(MIRA 15:2)

1. Ufaleyskiy nikelevyy zavod.
(Chernoye Lake region—Mine drainage)

YERMILOV, A.V.

New data on the stratigraphy of Lower Permian marine sediments in the southwestern part of the Chernyshev Ridge. Trudy Inst.geol. Komi fil. AN SSSR no.2:27-31 '62. (MIRA 15:7)
(Chernyshev Ridge--Geology, Stratigraphic)
(Chernyshev Ridge--Deep-sea deposits)

KIM, M.V.; BITADZE, M.A.; YERMILOV, B.F.; ZYDEL', A.I.; KUSHNEV, A.P.; LAZAREV, N.N.; MIRAV'YEV, D.M.; BONDAREV, P.D., kand. tekhn. nauk, nauchnyy red.; OSENKO, L.M., red.izd-va; RODIONOVA, V.K., tekhn.red.

[Erection of foundations under permafrost conditions; from practice used in the Norilsk region] Vozvedenie fundamentov v usloviiakh vechnomerzlykh gruntov; iz opyta Noril'skogo raiona. Moskva, Gosstroiizdat, 1962. 53 p. (MIRA 15:9)

1. Russia (1917- R.S.F.S.R.) Krasnoyarskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. (Foundations) (Noril'sk--Frozen ground)

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/4143

Avtomatizatsiya mekhanicheskoy obrabotki v Leningradskoy promyshlennosti (Automation of Mechanical Machining Processes in Leningrad Industry) Moscow, Mashgiz, 1959. 358 p. Errata slip inserted. 4,000 copies printed.

General Ed.: I.M. Kucher; Reviewers: N.V. Reshetikhin, Candidate of Technical Sciences, Docent, and Ye. V. Miller, Candidate of Technical Sciences, Docent; Eds. of Publishing House: T.L. Leykina and M.A. Chfas; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for technical personnel.

COVERAGE: The book deals with the automation of mechanical machining processes in small-lot production in Leningrad industry. The use of hydraulic copying slide rests is explained, and practical experience in the introduction of copying slide rests into leading Soviet plants is described. The improvement of such slide rests, the technical and economic effects resulting from their usage, and methods of designing master forms are discussed. New designs of hydraulic slide rests are described. Emphasis is laid upon problems of program control, especially for the simplest control systems, and a number of the original systems are described. Automation problems involved in the group machining method are investigated. No personalities are mentioned. There are 57 references: 46 Soviet and 11 English.

SECTION II.

NUMERICAL PROGRAM CONTROL

SECTION III.

AUTOMATION IN LOT PRODUCTION BASED ON THE GROUP MACHINING METHOD

AVAILABLE: Library of Congress

Card 3/5

VK/pw/mas
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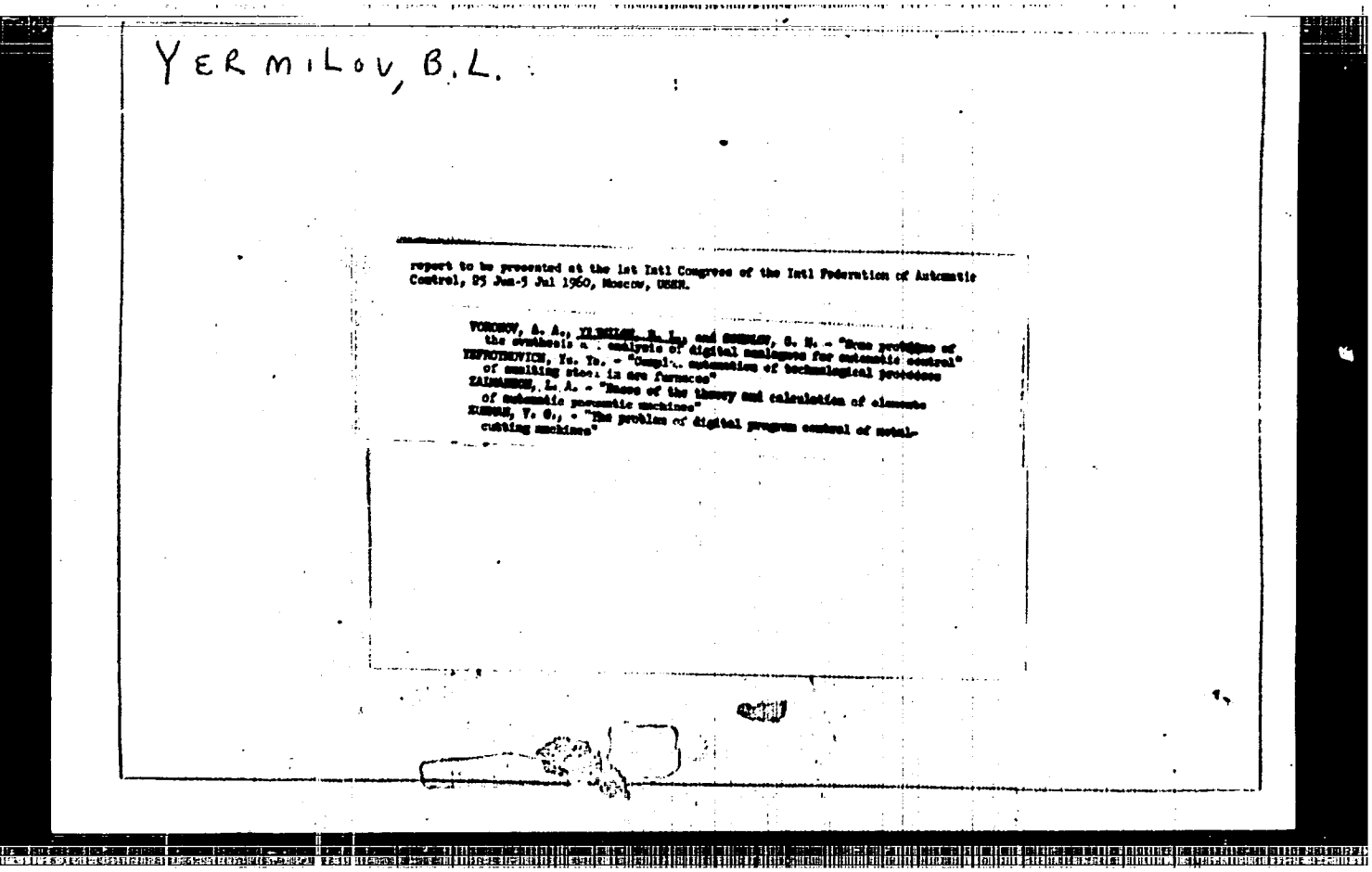

YERMILOV, B.L.

report to be presented at the 1st Intl Congress of the Intl Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

VORONOV, A. A., YERMILOV, B. L., and SHENKER, S. M. - "Some problems of the synthesis a . analysis of digital analogues for automatic control"
KEFROTHEVICH, Ye. Ye. - "Complex automation of technological processes of smelting steel in arc furnaces"
ZAIMOVSKIY, L. A. - "Bases of the theory and calculation of elements of automatic pneumatic machines"
KUDRIN, V. G., - "The problem of digital program control of metal-cutting machines"

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/5094

Voronov, Avenir Arkad'yevich, A. R. Garbuzov, B. L. Yermilov, M. B. Ignat'yev, G. G. Kornitenko, G. N. Sokolov and Yang Hsi-Tseng

Tsifrovyye analogi dlya sistem avtomaticheskogo upravleniya; tsifrovyye raznostnyye analizatory (Digital Analogs for Automatic Control Systems; Digital Differential Analyzers). Moscow, Izd-vo AN SSSR, 1960. 195 p. Errata slip inserted. 7,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut elektromekhaniki.

Ed.: A. A. Voronov, Doctor of Technical Sciences; Ed. of Publishing House: I. V. Barkovskiy; Tech. Ed.: V. T. Bochever.

PURPOSE: This book is intended to acquaint scientific and technical personnel with the latest developments in the field of computers.

INST: Institute Electronics AN SSSR (for all except Barkovskiy Bochever)

COVERAGE: Digital differential analyzers are a relatively new development in the field of computers and are not yet well elaborated theoretically. Some of the newest developments in combining universal digital machines

Card 1/8

Digital Analogs for Automatic (Cont.) SOV/5094

with nonlinear interpolators, such as the Ferranti interpolator, are as yet unknown to Soviet readers. While the Soviet literature contains several works describing the principles of construction and operation of differential analyzers intended for operation as computers, the main emphasis in this book is on general methods of synthesizing those machines which are intended to work as systems of automatic control, and also on problems of accuracy in operation. At present digital analogs are used mostly for programmed control of metalworking machines, where several operations, such as preparing data for control, feeding them into the computer, the computing process, and the process of control, are involved. The book investigates only the computing units of the control system. The authors state that the error of integration can be reduced by increasing the number of columns of multidigit numbers in the addend registers or by transition to more accurate, though more complicated, algorithms of approximate integration. However, they find that this complicates the system, and suggest a method which permits simplifying the system while maintaining its accuracy; that is, proceeding from difference, instead of differential, equations. A digital analog based on such principles should be called a digital "difference" analyzer instead of "differential" analyzer. The book discusses problems

Card 2/3

Digital Analogs for Automatic (Cont.) SOV/5094

of synthesis and analysis of both difference and differential equations. Ways to reduce errors and simplify the arrangement of such computers are indicated. The book attempts to present certain theoretical developments in this field and as a first attempt does not claim to give a full solution of the problem. It also includes some general information on systems of computation and on their basic units and presents examples of difference analyzers developed at the Institute of Electromechanics, AS USSR. The introduction, pars. 1-6 and 8 of Ch. III, Ch. IV, pars. 1 and 4 of Ch. V, and pars. 3 and 4 of Ch. VIII were written by A. A. Voronov; pars. 1 and 2 of Ch. VIII by A. R. Garbuzov; Ch. I by B. L. Yermilov; par. 7 of Ch. III and Appendix I by M. B. Ignat'yev; Ch. II by G. G. Kornilenko; and Ch. VI by G. N. Sokolov, all coworkers of the Institute of Electromechanics, AN USSR. Pars. 2 and 3 of Ch. V were written by Yang Hsi-Tseng, coworker of the Academy of Sciences, Chinese People's Republic, and Chapter VII was written jointly by A. A. Voronov and B. L. Yermilov. No personalities are mentioned. There are 76 references: 39 Soviet (including 1 in French and 1 translation) and 37 English.

Card 3/8

YERMILOV, B.L.

PHASE I BOOK EXPLOITATION SOV/4706

Akademiya nauk SSSR. Institut elektromekhaniki

Sbornik rabot po voprosam elektromekhaniki, vyp. 4: Elektricheskiye mashiny, elektricheskiy privod, elektricheskaya tyaga na peremennom toke, avtomatizirovannyy elektroprivod teleskopov, avtomaticheskoye regulirovaniye i pribory (Collection of Works on Problems in Electromechanics, No. 4: Electric Machines, Electric Drive, A-C Electric Traction, Automated Electric Drive of Telescopes, Automatic Regulation and Instruments) Moscow, 1960. 282 p. 3,500 copies printed.

Resp. Ed.: V. V. [illegible]; Ed. of Publishing House: L. V. Severov; Tech. Ed.: [illegible]

PURPOSE: This collection of works is intended for specialists in electromechanics.

COVERAGE: The collection contains 26 works divided into three sections: 1) Electric Machines, 2) Electric Drive and Electric Traction; 3) Automated Electric Drive, and Automatic Regulation and Instruments. No personalities are mentioned. References accompany most of the articles.

AUTOMATED ELECTRIC DRIVE. AUTOMATIC REGULATION AND INSTRUMENTS

2/2

PHASE I BOOK EXPLOITATION SOV/4411

Konferentsiya po voprosam teorii i primeneniya diskretnykh avtomaticheskikh sistem, Moscow, 1958

Teoriya i primeneniye diskretnykh avtomaticheskikh sistem; trudy konferentsii (Theory and Application of Discrete Automatic Systems; Transactions of the Conference) Moscow, AN SSSR, 1960. 572 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po avtomaticheskomu upravleniyu. Institut avtomatiki i telemekhaniki.

Editorial Board: M.A. Gavrilov, Doctor of Technical Sciences, [illegible], Doctor of Technical Sciences, V.A. Kotel'nikov, Candidate of Technical Sciences, A.Ya. Lerner, Doctor of Technical Sciences, I.S. Morosanov (Scientific Secretary), G.S. Pospelov, Doctor of Technical Sciences, A.A. Fel'dbaum, Doctor of Technical Sciences, A.V. Khramoy, Candidate of Technical Sciences, and Ya.Z. Tsypkin, Doctor of Technical Sciences; Resp. Ed.: Ya.Z. Tsypkin, Doctor of Technical Sciences; Ed. of Publishing House: M.L. Podgoyetskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: These transactions are intended for the members of the conference and other specialists in automatic control.

COVERAGE: The Conference on the Problems of Theory and Application of Discrete Automatic Systems took place in Moscow from September 22 to 26, 1958. It was the first conference devoted to discussions of the present status of the theory and techniques of discrete automatic systems and to planning for future development. The papers discussed at the conference have been divided into four groups. In the first group optimization switching circuits are discussed as well as methods of relay control systems, in particular plant lag control systems in which are realized optimal processes as to quick response. The second group of papers is devoted to the analysis and synthesis of pulse systems with variable parameters, of pulse systems with several pulse components, to the study of self-oscillation phenomena in nonlinear pulse systems, and to the methods of calculating linear pulse systems. Problems of simulating pulse systems and descriptions of some pulse regulators have also been included. The third group of papers deals with digital systems. Problems of using elements of digital technique and digital computers for the automation of various fields of engineering, i.e., power engineering, mining, radio communication, metallurgy, etc., are discussed. Problems of analog-digital conversion and vice versa as well as problems of developing specialized functional converters have been included in this group. The fourth group of papers includes theoretical elements and certain practical applications of the simplest types of self-adjusting systems, optimalizing control systems, which are developed as relay, pulse and digital devices. Here are also found papers describing various methods of investigating steady state conditions in optimalizing systems, results of studying the effects of random factors on the process of automatic scanning, and examples of existing optimalizing control systems. Some of the more interesting communications and observations made during the discussion of the various conference papers have also been included in the Transactions. Personalities and references accompany most of the papers.

Gitis, E.I. (Moscow). Suggestions for the Classification of Analog-to-Digital Converters
There is 1 Soviet reference. 323

Mikhaylov, I.I. (Gorlovka, Stalinskaya Oblast'). Transmitter of the Angle of Rotation of a Multiturn Axle
The author describes the transmitter according to the author's certificate issued in his name. There is 1 Soviet reference. 326

Karmacheyev, Yu.I., N.A. Kolesnikova, and Yu.N. Prozorovskiy (Moscow). High-Speed Electric Vacuum Devices Converting Continuous Data Into Discrete and Vice Versa for Use in Wideband Systems of Communication Transfer With Pulse-Code Modulation
The authors describe coding, decoding, and regenerating cathode-ray devices used in pulse-code modulation systems. There are 5 references: 2 Soviet and 3 English. 329

Yermilov, B.I. (Leningrad). Some Types of Digital Function Generators 339
The author investigates the structure of a square-law function generator and of a pulse device for extracting square roots. There are 6 references: 2 Soviet and 4 English.

YERMILOV, B.I.

9,7000

B/123/61/000/009/016/027
A004/A104

AUTHOR: Yermilov, B. L.

TITLE: Digital analogs

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1961, 19, abstract 9D135 ("Sb. rapot po vopr. elektromekhan. In-t elektromekhn. AN SSSR", 1960, no. 4, 202-213)

TEXT: It is pointed out that digital analogs combine the high precision of digital computors with the rapid action of mathematical models and are, above all, employed in carrying out individual mathematical operations. They are digital analogs of computers of continuous action. They are characterized by the fact that the preparation for the solution of the problem is carried out by methods used in continuous-action computers instead of digital coding methods. The rating of errors is effected by digital methods. The author analyzes the execution of an operation of raising to a square a variable magnitude with numerical pulse representation and monotonic character of its variations, and also the extraction of square and cubic roots. For the nonmonotonic variation of variable magnitudes reversible counters are used which register the increment

Card 1/2

Digital analogs

S/123/61/000/009/016/027
A004/A104

B

signs, the absolute magnitude of which is transmitted over several channels or on one channel but in different ways. The author enumerates the fields of application of digital analogs.

G. Flidlider

[Abstractor's note: Complete translation]

Card 2/2

1.7000 also 1013, 1031

27978
S/194/61/000/004/010/052
D249/D302

AUTHOR: Yermilov, B.L.

TITLE: Some types of functional digitizers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 4, 1961, 21, abstract 4 B159 (V sb. Teoriya i primeneniye diskretn. avtomat. sistem, M., AN SSSR, 1960, 339-351)

TEXT: Program control of milling machines is considered. The control device consists of the pulse generator, adder and variable division-ratio pulse count divider. A description is given of the squaring and square root-extraction devices, the latter consisting of a pulse generator, two counters with their gating circuits, delay line, etc. The control device is set for obtaining functions of the type $y = a^2 - (a - x)^2$. The reversible polarity counter takes into account the sign of the increments of the variables. By replacing one of the adders with the subtracter, relations of the type

Card 1/2

Some types of functional digitizers

$y = \sqrt{a - x}$ can be obtained. More complex functions can be simulated by combining in succession the devices described, e.g. the successive connection of the squaring and square-root extracting devices produces the solution to the equation of the circle, $y = \sqrt{r^2 - x^2}$. 13 figures. 6 references. [Abstracter's note: Complete translation]

Card 2/2

16,6000

S/044/61/000/008/039/039
C111/C333

AUTHOR: Yermilov, B. L.

TITLE: Digital analogoues

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1961, 50-51, abstract 8V305.("Sb. rabot po vopr. elektromekhan. In-t elektromekhan. AN SSSR", 1960, vyp 4, 202-213)

TEXT: It is mentioned that a high velocity and exactness of the calculations is demanded for the application of computing machines in systems of automatic control. In the last years, digital analogues of the continuously operating computing instruments are developed, whereby the representation of the variables with the aid of pulse count and code pulse is used. The non-linear functional transformations are realized in the digital analogues on the basis of methods of numerical integration. The author considers a number of digital analogues for operations: a digital analogues for the quadrature of the variable $x(t)$; an analogue realizing the operation $y = a^2 - (a-x)^2$; a digital analogue for extracting the square root, an analogue for extracting the cubic root. Furthermore, the principle of the union of operational digital analogues for the performance of complicated function opera-

Card 1/2

S/044/61/000/008/039/039
C111/C333

Digital analogues

tions is considered. The author directs to the good chances for the use of digital analogues in automatic control systems in practice, among them for program controls for metal shearing workbenches.

[Abstracter's note: Complete translation.]

Card 2/2

31014
S/573/61/000/005/004/023
D201/D305

9.7100

AUTHORS: Yermilov, B.L., and Radchenko, A.N.

TITLE: Digital analogues using shift registers with logic feedback

SOURCE: Akademiya nauk SSSR. Institut elektromekhaniki. Sbornik rabot po voprosam elektromekhaniki. no. 5, Moscow, 1961. Avtomatizatsiya, telemekhanizatsiya i priborostroyeniye, 39 - 53

TEXT: In the present article, the method is considered of synthesizing digital analogues which, being slow in their operation, permit a decrease substantially, in the power consumption and their overall dimensions and an increase somewhat in their reliability. For the computing unit it is proposed using a shift register with feedback logic. The input of the computing bloc consists of shift pulses, its capacity being determined by the logic structure of the feedback. A register with feedback may perform integration and other operations by means of a unitary code; thus the necessary re-

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Digital analogues using shift ...

quirement in digital analogues with logic feedback is the transformation of a ring code into a unitary one. The basic computing unit consists of two manitypes of registers with logic feedback as shown in Fig. 1 A and B. In circuit A the feedback is formed by the logic of

$$\psi_A = a\bar{d} + \bar{a}d$$

and in that of circuit B by

$$\psi_B = \bar{a}b + a\bar{b}(c + d).$$

The register B is the reverse of A, with a period of 15. The two registers are connected together to form the basic element of a digital analogue. The first takes the role of an integrator, producing data in a ring code, the second - acts as a decoder, transforming the ring code into the unitary one. Squaring and taking of the square roots are discussed with the example of reproducing the function $z = x^2$ for squaring and $z^2 - x = 0$ for the square root. Their solution lead to the bloc diagrams of Fig. 4a and 4b, using the same register circuits as shown in Fig. 1 with delay lines between

Digital analogues using shift ...

the stages. The maximum value of the input variable is stated to be $x_{max} \leqslant \frac{m+1}{2}$ for both analogues, where m is the capacity of the register. The digital analogue described may also reproduce sine and cosine functions as the result of solving the equation $d^2y/dt^2 + y = 0$ with initial conditions $t_o = 0$, $y_o = R$ and $x_o = 0$, where $x = dy/dt$. The solution of this equation is

$$\left.\begin{aligned} x &= R \sin t, \\ y &= R \cos t, \end{aligned}\right\} \qquad (13)$$

which corresponds in the plane xy to the equation of a circle with the center at the origin $x^2 + y^2 = R^2$. Practical recommendations are also given on the capacity of registers, the methods of their interconnections etc. There are 8 figures, 3 tables and 5 Soviet-bloc references.

Card 3/4

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S/573/61/000/005/004/023
D201/D305

Digital analogues using shift ...

Fig. 1.

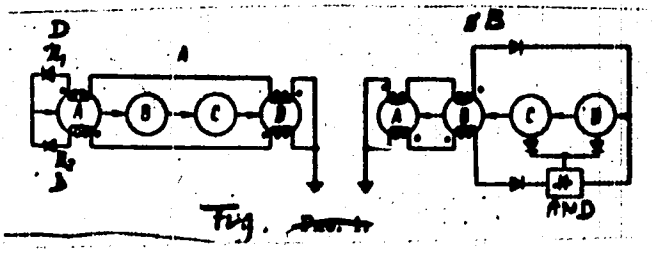
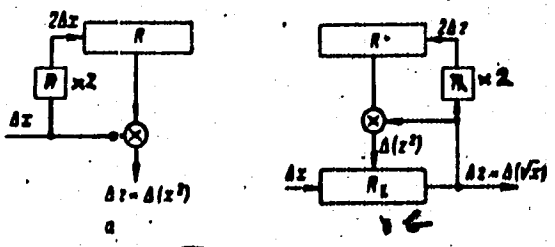


Fig. 4.



Card 4/4

16.6800 (1121, 1327, 1329)

32590
S/569/61/003/000/009/011
D201/D305

AUTHORS: Voronov, A.A., Yermilov, B.L., and Sokolov, G.N. (USSR)

TITLE: Certain problems of synthesis and analysis of digital automatic control analogues

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Statisticheskiye metody issledovaniya. Teoriya struktur, modelirovaniye, terminologiya, obrazovaniye. Moscow, Izd-vo AN SSSR, 1961, 407 - 420

TEXT: The author analyze the following types of function generators: 1) Generation of polynomials. The prototype of this digital analogue may be said to be the circuit of a continuous analogue, with series connected r + 1 integrators. With a $y^{r}(o)$ = const. input, such a circuit generates a polynomial of t of the r-th degree, whose coefficients depend on the initial values of integrands. By adding a feed-back, an arrangement may be obtained for reproducing

Card 1/4 2

the inverse function $y = \sqrt[n]{n}$. 2) Generation of function Axy + Bx + + Cy. This problem may be solved using the circuit of B.L. Yermilov for multiplication by each other of two variables (Fig. 2). 3)Generation of circles. The example of digital analogue as evolved by G. N. Sokolov (Fig. 3) is considered. The generation of a circle may also be obtained by the method of B.L. Yermilov. This circuit (Fig. 4) solves

$$y = \sqrt{R^2 - x^2} . \qquad (19)$$

It is of interest in that the error, due to limiting the digits, does not exist. The cct is actually a combination of the squaring and root extracting circuits suggested by B.L. Yermilov and V.V. Semenov. The circuits described show how, from given properties of a problem, a substantial simplification of circuit and its number of components may be obtained. There are 2 tables, 5 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Anon. Computing machines. Mech. Eng., v. 73, p. 325-327, Apr. 1951; R.E. Sprague, Mathem. Tables and other Aids to Computation, no. 37, p.41-49,

YERMILOV, B.L.

Algorithm of a digital device for reproducing equidistant curves. Sbor. rab. po vop. elektromekh. no.9:66-70 '63. (MIRA 17:2)

ACC NR: AP6025656 SOURCE CODE: UR/0413/66/000/013/0108/0109

INVENTOR: Yermilov, B. L.

ORG: None

TITLE: A device for division of two variables given in the form of increments. Class 42, No. 183488 [announced by the Institute of Electromechanics, State Committee on Electrical Engineering, State Planning Commission SSSR (Institut elektromekhaniki Goskomiteta po elektrotekhnike pri Gosplane SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 108-109

TOPIC TAGS: flip flop circuit, computer component, arithmetic unit

ABSTRACT: This Author's Certificate introduces a device for division of two variables given in the form of increments. The unit contains two digital integrators and an adder. To simplify the circuit, make the process reversible and ensure high accuracy in the result, the installation contains single-register integrators for the quotient and divisor with corresponding code transmission circuits, a cumulative adder, flip-flop and four diodes. The outputs of the code transmission circuits for the quotient and divisor are connected to the code inputs of the adder which accumulates the difference between the dividend and the product of the quotient by the di-

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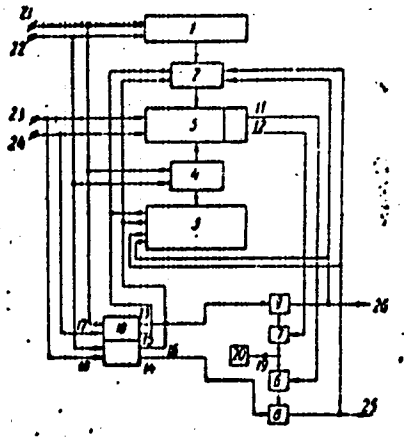
UDC: 681.142.07

visor. The one and zero states of the sign digit in the adder are connected to the first inputs of the first and second diodes respectively, while the second inputs of these diodes are connected to an external pulse generator. The outputs of the first and second diodes are connected to the first inputs of the third and fourth diodes respectively, while the second inputs of these diodes are connected to the inverse and direct potential outputs of the flip-flop respectively. The direct and inverse pulse outputs of this flip-flop are connected to the inputs of the quotient register and divisor code transmission circuit. Also connected to these inputs are the outputs of the third and fourth diodes. The set terminal of the flip-flop is connected to the input for positive increments in the divisor and negative increments in the dividend. The reset terminal of the flip-flop is connected to the opposite inputs for these increments.

ACC NR: AP6025656

1 and 2--register and transmission circuit for divisor code; 3 and 4--register and transmission circuit for quotient code; 5--adder; 6-9--first, second, third and fourth diodes respectively; 10--flip-flop; 11 and 12--one and zero states of the sign digit in the adder; 13 and 14--direct and inverse potential outputs of the flip-flop; 15 and 16--direct and inverse pulse outputs for the flip-flop; 17 and 18--flip-flop set and reset terminals; 19--terminal connected to external pulse generator 20; 21 and 22--inputs for positive and negative increments in the divisor; 23 and 24--iputs for positive and negative increments in the dividend; 25 and 26--outputs for positive and negative increments in the quotient



SUB CODE: 09/. SUBM DATE: 26Jul65

Card 3/3

BERESHCHINOV, A.M., gornyy inzh.; YERMILOV, A.V.

Improvement of boring and blasting operations in Ufaley open-pit mines. Gor. zhur. no.5:35 My '62. (MIRA 16:1)

1. Ufaleyskiy nikelevyy zavod.
(Nickel mines and mining) (Blasting)

YERMILOV, Boris Pavlovich; ZAKATOV, Petr Sergeyevich; KUTUZOV, Mikhail Mikiforovich; MURAVIN, Mark Mikhaylovich; SAYENKO, Dmitriy Vasil'yevich; TROITSKIY, Boris Vladimirovich; RUDSHTEYN, M.L., redaktor; POVALYAYEV, P.I., redaktor; KUZ'MIN, G.M., tekhnicheskiy redaktor

[Geodesy] Geodeziia. Pod obshchei red. P.S.Zakatova. Moskva, Izd-vo geodezicheskoi lit-ry. Pt. 1. 1954. 519 p. (MLRA 8:7)
(Geodesy)

YERMILOV, D. K.

USSR/Medicine - Infectious Diseases (Veterinary) May 51

"Some Remarks on the STI Vaccine," P. D. Shat'ko, K. I. Plotnikov, K. P. Voroshilov, Veterinarians, D. K. Ermilov, Honored Vet of the Republic

"Veterinariya" Vol XXVIII, No 5, pp 34, 35

Anti-anthrax vaccine STI was found to be reliable prophylactic which confers immunity for 10-12 mo. However, in 1950 forced vaccinations with STI were followed by infection with anthrax and death of some horses and cattle. Weather at time these infections occurred was hot and there was great number of horse flies [illegible] which are assumed to transmit anthrax. Microscopic exams of smears from carcass of dead animals disclosed noncapsular anthrax bacilli in 47.8% of the cases, while such bacilli were present only in 13% of the cases in corpses of exptl animals infected with initial material.

1B2T77

SHAT'KO, P.D.; KORNILOVA, A.L.; YERMILOV, D.K. [deceased]

Natural foci of rabies in Novosibirsk Province. Zhur. mikrobiol., epid. i immun. 40 no.6:33-38 Je '63.
(MIRA 17:6)

1. Iz Novosibirskoy oblastnoy veterinarnoy bakteriologicheskoy laboratorii.

YERMILOV, A., podpolkovnik.

Signal system for columns of amphibious vehicles on the march. Voen.-inzh. zhur. 101 no.5:23 My '57. (MLRA 10:6)
(Vehicles, Amphibious)

KRECHETOV, V.; YERMILOV, G. (Simferopol')

Headquarters or office? Grazhd. av. 22 no.7:26-27 Jl '65. (MIRA 18:7)

1. Komandir Noril'skogo aviatsionnogo podrazdeleniya (for Krechetov).

YERMILOV, G. A. (ENGR)

Dissertation: "An Investigation of the Process of Hackling With a Small Combing Roller for the Purpose of Determining Its Basic Parameters for the High-Productive Hackle of a Noncarding Machine." Cand Tech Sci, Moscow Textile Inst, 30 Jun 54, Vechernyaya Moskva, Moscow. 22 Jun 54.

SO: Sum 318, 23 Dec. 1954

ZOLOTAREV, Nikolay Il'ich; YERMILOV, Grigoriy Andreyevich; ASTASHEV, A.G., retsenzent; KOPELEVICH, E.A., retsenzent; ISLANKINA, T.F., red.; MEDVEDEV, L.Ya., tekhn.red.

[Machinery for combing cotton] Chesal'nye mashiny dlia khlopka. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 147 p. (MIRA 13:3)
(Cotton machinery)

YERMILOVA, G.I.; KORNEV, A.Ye.; LEVIN, P.I.; LEBEDEVA, I.N.; GRINBERG, A.Ye.; FRISHMAN, T.A.

Effectiveness of some stabilizers in the extrusion of polypropylene films and their aging. Plast. massy no.5:46-49 '65. (MIRA 18:6)

YERMILOV, G. B.

Yermilov, G. B. - "On the interrelationships of plants within a species", (With editorial comment), Yestestvoznaniye v shkole, 1949, No. 2, p. 7-17.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nyikh Statey, No. 20, 1949).

YERMILOV, G. B.

Agriculture

Plant and light, Moskva, Gos. izd-vo sel'khoz. lit-ry, 1952.

Monthly List of Russian Accessions. Library of Congress October 1952 UNCLASSIFIED

YERMILOV, G.B.

Seeds -- Dissemination

Dissemination and concentration of seeds

Dokl. AN SSSR 84, No. 3, 1952
rcd. 2 Dec. 1949

SO: Monthly List of Russian Accessions, Library of Congress, Sept. 1952 [illegible], Uncl.

ERMILOV, G. B.

USSR/Agriculture - Plant Physiology

Card : 1/1

Authors : Ermilov, G. B.

Title : Effect of the short day on the growth and cold resistance of red clover

Periodical : Dokl. AN SSSR, 96, Ed. 5, 1061 - 1064, June 1954

Abstract : The experimental material shows that the growth of clover plants during a day time cycle of less than 12 hours leads to a decrease in clover harvest in the following year. The growth of clover plants during short days results in reduction in the number of winter plants and reduces the possibility of the buds and stalks on the plant to grow again. Seven references. Tables.

Institution : Acad. of Sc. USSR, Ural Branch, Biological Institute

Presented by : Academician, A. L. Kursanov, March 16, 1954

YERMILOV, G.B.; ZABLUDA, G.V., professor, otvetstvennyy redaktor

[Biological principles in sowing red clover] Biologicheskie osnovy poseva krasnogo klevera. Sverdlovsk, Akademiia nauk SSSR, Ural'skii filial, 1956. 72 p.
(Clover) (MLRA 9:11)

YERMILOV, G.B.

Productivity of corn leaves in the Non-Chernozem zone [with summary in English]. Fiziol. rast. 4 no.6:542-547 N-D '57. (MIRA 10:12)

1. Institut biologii Ural'skogo filiala AN SSSR, Sverdlovsk.
(Corn (Maize)) (Leaves)

YEREMILOV, G.Z.

Water cycle of germinating red clover seeds [with summary in English]. Fiziol. rast. 5 no.3:245-252 My-Je '58. (MIRA 11:6)

1. Ural'skiy filial Akademii nauk SSSR, Sverdlovsk.
(Clover)
(Germination)
(Soil moisture)

YAKHILOV, G.B.

Experimental school fields on collective farms and state farms.
Politekh. obuch. no.9:39-41 S '58. (MIRA 11:10)
(School gardens)

YERMILOV, G.B.

Interrelationships of Trifolium sativum (Crome) plants during their first year of life. Bot.zhur. 43 no.11:1633-1638 N '58. (MIRA 11:11)

1. Ural'skiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva, Sverdlovsk.
(Clover) (Plants, Space arrangement of)

YERMILOV, G. B.

AUTHOR: Yermilov, G. B. 20-3-52/59

TITLE: On the Problem of the Physiology of Plant Flowering (K voprosu o fisiologii tsveteniya rasteniy).

PERIODICAL: Doklady AN SSSR, Vol. 118, Nr 3, pp. 598-600 (USSR), 1958

ABSTRACT: The transition of the plants from the vegetative stage to flowering and the conditions of this transition had since a long time attracted attention. However, the importance of the individual characteristic features of the plants itself has hitherto been taken into account only to a small extent especially the influence of these properties which depend on the seed quality has been researched little. The seeds, however, are never equal within the range of an ear or of a grain (references 1,2). The author observed the consequences of the characteristic features of the seeds on the details of flowering in seeds of various ripeness. 5 maize sorts were sowed and the seeds were gathered a) at the begin of , and b) during the stage of milk ripeness, and c) during the stage of growth ripeness. All these seeds had a much lower weight than normally matured seeds (table 1). The imperfect development of the seeds

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prevented neither the good development of the crop nor the development of completely normal plants from them. The differences in germination amounted to 2 days at most. The equality of the plants before the harvest is shown in table 2. Since the summer of 1956 was cool the flowering of even the earliest sorts began only in the end of July. Table 3 shows that the time of flowering of male as well as of female inflorescences is to a great extent influenced by the maturity of the seeds. The flowering began 4-12 days sooner in the case of plants from more mature seeds and took a more uniform course. The plants from less ripe plants were taller. This shows indirectly their slower generative development (table 2). The above mentioned results show that the degree of ripeness of the seed does not exercise any considerable influence on the growth of the vegetative parts of maize plants (references 4,5). The mentioned influence on the begin of flowering is only possible if plants from seeds of different degrees of ripeness react differently to one and the some environmental conditions, in other words, if their metabolism takes a somewhat different course. Furthermore it can be concluded from the results that the not simultaneous flowering which can always be observed

under field conditions can be explained not only by the differences of the microconditions of growth, but also by the individual characteristic features of the seeds from which the plants are grown, especially by the degree of ripeness of the first. This might be one of the reasons of the long known importance of using greater and equal seeds (reference 6) for sowing. Here not only the greater stock of substance, but also the evenness of the seeds with respect to the development of the embryo and to the overall maturity as well as with respect to the capability of a more uniform reaction to the environmental conditions can play a rôle, especially to the conditions which determine the development processes. The influence of the individual characteristic features of the seeds must be taken into account in physiological experiments concerning their flowering. Especially the influence of the state of the seeds (of their ripeness and chemical composition) must be taken into account in the study of the conditions which are important for the development of the plants.

On the Problem of the Physiology of Plant Flowering 20-3-52/59

There are 3 tables, and 6 references, all of which are Slavic.

ASSOCIATION: Institute for Biology of the Ural Branch AN USSR (Institut biologii Ural'skogo filiala Akademii nauk SSSR)

PRESENTED: August 23, 1957, by A. L. Kursanov, Academician

SUBMITTED: August 20, 1957

AVAILABLE: Library of Congress

Card 4/4

YERMILOV, G.B., kand.biolog.nauk, starshiy nauchnyy sotrudnik; GREBNEV, B., red.; PAL'MINA, N., tekhn.red.

[Red clover] Krasnyi klever. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1959. 120 p. (MIRA 14:3)

1. Ural'skoye otdeleniye Nauchno-issledovatel'skogo instituta sel'skogo khozyaystva (for Yermilov).
(Clover)

YERMILOV, G.B.

Biological differences in corn varieties. Fiziol.rast. 6 no.3: 361-362 My-Je '59. (MIRA 12:8)

1. Ural Scientific Research Agricultural Institute, Sverdlovsk.
(Corn (Maize)--Varieties) (Plants--Transpiration)

YERMILOV, G.B. (Sverdlovsk)

Method of observing the growth of the corn plant. Bot.zhur. 44 no.6:805-807 Je '59. (MIRA 12:11)
(Corn (Maize)) (Growth (Plants))

17(4),30(1)

AUTHOR: Yermilov, G. B. SOV/20-125-2-52/64

TITLE: On the Water Balance of Germs During the First Days of Their Life (O vodnom rezhime prorostkov v pervyye dni ikh zhizni)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 420-423 (USSR)

ABSTRACT: The period from seed germination to the appearance of the germ on the surface belongs to the most critical periods in the life of plants (Ref 1). The physiology of germination and the environmental influence on this stage, however, belong to the most unsatisfactorily investigated problems (Refs 2,7). In order to study the aforesaid problem, the author applied Fil'ter's principle (according to reference 2). The seed swelling ceased in a certain stage which corresponded to the water amount assimilated by the seed or consumed by the germ. Seeds of summer wheat "Moskovka", local summer vetch, peas "Kapital" and Indian corn VIR-42 were sown in glasses with sand in a depth of 5 cm. Tap water in quantities of 5, 7, 9, and 11 % of the total capacity of humidity was filled in and no water was added afterwards. As soon as equilibrium between the water in the sand and in the seed or germ had

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been established after 8-10 days, the germs were taken out, sorted and divided into three parts: cotyledons (endosperm), germ (coleoptiles), and root. The seed (appearance of the root) begins to germinate as soon as the seed has attained a certain degree of saturation with water (Table 1). It is not the absolute assimilated quantity of water which is determining in this respect, but the degree of saturation. It may be expressed by the water content in % of the absolute dry weight of the seed. In the case of the vetch it amounts to ~110 %, with peas it is 85 %, with Indian corn it is 38 %, with wheat it is 57 %. In the case of water lack the small seeds will germinate first since they will have attained the necessary degree of saturation more rapidly with the same assimilated quantity of water. The cotyledons and the endosperm are important to the water supply of the root and germ during the first days of life. The quantity of water assimilated until the moment when the germ appears is insufficient for the growth of the latter (Table 2). The newly assimilated water is conveyed primarily into the germ (coleoptiles) and is concentrated there (Table 3). Figures 1, 2, and 3 show

the dependence of the growth of roots and germs on the quantity and content of water contained in them. With the growth of coleoptiles the ratio of growing and mature parts varies (Table 4). Table 5 shows the dependence between the water balance of coleoptiles and the particularities of growth of their individual parts. The length is closely connected with the water balance. The length depends less on the saturation of the germs. In the case of vetches and peas the length of germs depends to a certain extent on the saturation of cotyledons, which does not hold for Indian corn. The length of the root depends less on the quantity of water and does not depend on the saturation. There is no connection between the saturation of the roots and germs on the one hand and their dry weight on the other (pea, vetch), or there is only a small one (Indian corn). There are 3 figures, 5 tables, and 7 Soviet references.

On the Water Balance of Germs During the First Days of Their Life SOV/20-125-2-52/64

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva (Ural Scientific Research Institute of Agriculture)

PRESENTED: December 9, 1958, by A. L. Kursanov, Academician

SUBMITTED: December 8, 1958

Card 4/4

YERMILOV, G.B.

Some characteristics of the absorption of water by seed corn.
Fiziol.rast. 7 no.1:49-56 '60. (MIRA 13:5)

1. Plant Physiology Laboratory of Ural Scientific Research Agricultural Institute, Sverdlovsk.
(Corn(Maize))

YERMILOV, G.B.

Effect of gibberellic acid on seed germination and seedling resistance in corn. Izv. AN SSSR. Ser. biol. 26 no.1:33-39 Ja-F '61. (MIRA 14:3)

1. The Ural Branch of Academy of Sciences of the U.S.S.R., Sverdlovsk.
(GIBBERELLIC ACID) (CORN (MAIZE))
(GERMINATION)

YERMILOV, G.B.

Effect of the Internal processes in plants on the productivity of corn leaves. Fiziol.rast. 9 no.4:393-397 '62. (MIRA 15:9)

1. Ural'skiy filial Akademii nauk SSSR, Sverdlovsk.
(CORN (MAIZE)) (PHOTOSYNTHESIS)

YERMILOV, G.B. (Tyumen')

Effect of growing conditions on the morphology of corn seedlings.
Bot. zhur. 48 no.4:585-588 Ap '63. (MIRA 16:5)
(Corn (Maize)) (Sowing)

BAIYUZEK, F.V.; BURMISTROV, M.I.; DZUTSOV, N.K.; YERMILOV, V.I.; KARIMOVA, T.V.; SKORIK, V.I.; UVAROV, B.S.; SHANIH, Yu.N.; SHAMARINA, T.N.

Artificial circulation in surgery of the heart and large vessels. Grud.khir. no.4:33-39 Jl-Ag '62. (MIRA 15:10)

1. Iz kliniki khirurgii usovershenstvovaniya vrachey No. 1 (nach. - deystvitel'nyy chlen AMN SSSR prof. N.A.Kupriyanov) Voyenno-meditsinskoy akademii imeni S.M.Kirova. Adres avtorov: Leningrad, K-9, pr. K.Marksa, d. 5/20 Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey No. 1.

(HEART—SURGERY)
(PERFUSION PUMP (HEART)

SKLYAROV, Yu.A.; POLYAKOV, V.M.; YERMILOV, G.P.

Photographic observations of minor planets and of Seki-Lines' comet in Saratov. Biul.Inst.teor.astron. 9 no.8:576 '64.

(MIRA 17:12)

1. Saratovskiy pedagogicheskiy institut i Saratovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva.

ERMILOV, I. Ya. Pa-2133

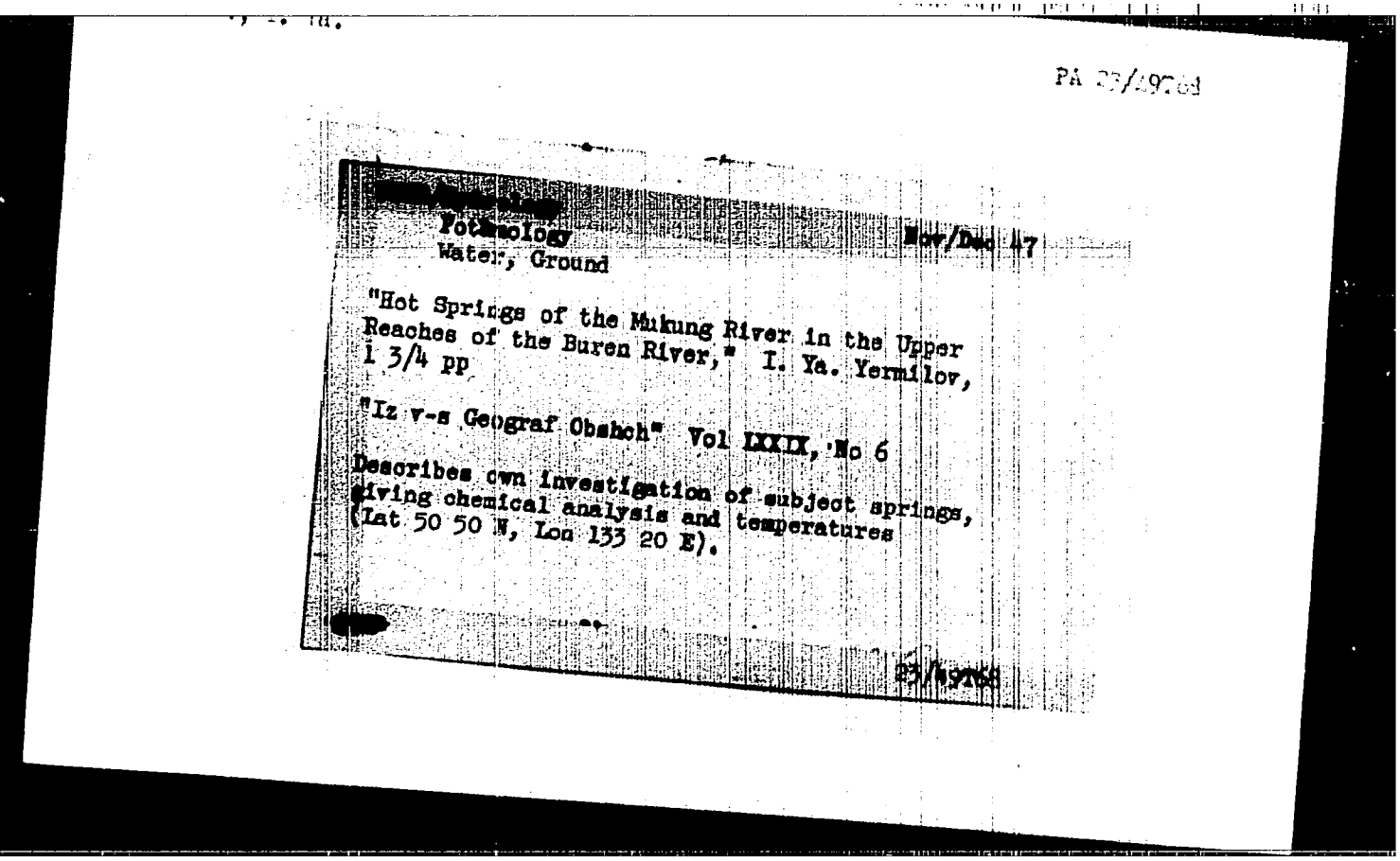
USSR/Arctic Studies - Frozen Soil May/Jun 1946

"Frozen Soil in Bogoslov Region of the Middle Urals," I J Ermilov, 2 pp

"Izv Geog" Vol 78, No 5-6

Number of years soil was frozen at various depths

2133



[redacted]

Hydrology Nov/Dec 47
Water, Ground

"Hot Springs of the Mukung River in the Upper Reaches of the Buren River," I. Ya. Yermilov, 1 3/4 pp

"Iz v-s Geograf Obshch" Vol LXXIX, No 6

Describes own investigation of subject springs, giving chemical analysis and temperatures (Lat 50 50 N, Lon 133 20 E).

[redacted]

YERMILOV, I.Ya.

Thermal springs in the Mukungi River Valley on the western slope of the Burein chain. Trudy Lab. Gidrogeol. Problem 3, 301-4 '48. (MLRA 3:2)
(CA 47 no.18:9530 '53)

YERMILOV, I. YA.

PA5/49T39

USSR/Geology
Tectonics
Volcanology

Mar/Apr 48

"Mud Volcano - Akpatlaakh," I. Ya. Yermilov, 1 p

"Iz v-s Geog Obshch" Vol LXXX, No 2

Akpatlaakh, in southwest part of Turkmen SSR, 7 km from Caspian Sea, is largest and most remarkable mud volcano in the region. Height is 90 meters, circumference, 3 km, and base area, 4.5 sq km. Describes appearance in detail. Erupts periodically. Detailed knowledge of its structure would be of importance for the tectonics of the whole area, and possibly of considerable practical significance.

5/49T39

YERMILOV, I. YA.

20569 YERMILOV, I. YA. Formy solovoy akkumulyatsii v solonchakovykh pustynyakh zapadnoy turkmenii. Izvestiya vsesoyuz. geolr. o-va, 1949, vyp. 3, s. 327-33.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva - 1949

YERMILOV, I. Ya.

Method of bringing the static level of mineralized water of drill holes to that of fresh water. Geol.sbor. no.3:245-248 '55. (MLRA 8:6)
(Water, Underground)

YERMILOV, I.Ya.

Original forms of sculptural microrelief on the Mangyshlak Peninsula. Geog.sbor. no.10:172-174 '58. (MIRA 12:1)
(Mangyshlak Peninsula--Geology, Stratigraphic)

YERMILOV, L.P.

Some changes in the blood coagulation system in arteriosclerosis of the coronary arteries of the heart. Kardiologiia 2 no.1:37-43 Ja-F '62. (MIRA 15:5)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni akademika Pavlova.
(BLOOD--COAGULATION) (ARTERIOSCLEROSIS)

YERMILOV, L.P.

Correlation of the level of prothrombin and fibrinogen in the blood plasma in stenocardia and myocardial infarct. Sov.med. 26 no.10:14-17 O '62. (MIRA 15:12)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni I.P.Pavlova.

(PROTHROMBIN) (FIBRINOGEN)
(ANGINA PECTORIS) (HEART--INFARCTION)

3.5000
3.9000

80573
SOV/169-59-7-7197

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 7, p 109 (USSR)

AUTHOR: Yermilov, S.N.

TITLE: On the Problem of the Influence of Advection on the Temperature Distribution Near a Base Surface

PERIODICAL: Tr. Leningr. gidrometeorol. in-ta, 1958, Nr 8, pp 169 - 180

ABSTRACT: The non-stationary problem of air-mass modification under the effect of turbulent mixing along the vertical and temperature transfer along the horizontal by an orderly velocity of wind (advection) is discussed. According to this, the equation of the problem has the form:

$$\frac{\partial \tau}{\partial t} + u\frac{\partial \tau}{\partial x} = \frac{\partial}{\partial z} k(z)\frac{\partial \tau}{\partial z},$$

where: τ is the temperature, t is the time, u is the velocity of wind, directed along the horizontal coordinate axis x, k(z) is the turbulence ratio of thermal diffusivity, which is assumed to be a power function of the altitude z. The velocity of wind u is assumed to be constant. The following data are considered to be

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On the Problem of the Influence of Advection on the Temperature Distribution Near a Base Surface

given as boundary conditions: the temperature at the base surface $z = 0$, the distribution of temperature within the quadrant $x > 0$, $z > 0$ at the initial instant $t = 0$, and the distribution of temperature along the "initial half-ray" $x = 0$. The solution is sought, which is limited for $z = \infty$. The problem in such a formulation was solved earlier by M.Ye. Berlyand (Prediction and control of the thermal regime of the atmosphere layer near the earth surface, Gidrometeoizdat, 1956); who applied the two-fold operational transformation with respect to variables t and x. The same solution is obtained in the present reviewed work, but by an other method and accordingly in an other form. Namely, the author following the idea and guidance of D.I. Laykhtman after having used the operational transformation with respect to variable t, employed the integral Gruenberg transformation with respect to variable z. In consequence, the author obtains the solution composed by simple and double integrals, and some of the quadratures must be carried out in the complex range according to the Riemann-Mellin-formula. The interpretation of a series of interesting special cases is original in the work. In section A the author discusses the event when the temperature of

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the base surface does not vary in time. In this case the solution is represented by a degenerated hypergeometric function. The computations are performed for three particular subcases:

I $k_o = 0.2\ m^2/sec$, $u = 2\ m/sec$

II $k_o = 0.3\ m^2/sec$, $u = 2\ m/sec$

III $k_o = 0.3\ m^2/sec$, $u = 5\ m/sec$

(k_o is the value of the ratio of the turbulent thermal diffusivity at an altitude of 1 m). It is shown that the thickness of the boundary layer is greater for higher values of the turbulence ratio (case II relatively to I) and for lesser velocities of wind (case II relatively to III). For the subcase I the variation of the turbulent heat current along the horizontal is plotted; this current decreases with an increase in the distance from the initial line $x = 0$, and the decrement rate diminishes with an increase of x. In section B the event is investigated when the temperature of the base surface is not depending on x and varies discretely in time.

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The author assumes that the temperature on the surface $z = 0$ is equal to some constant value different from the initial value during a certain interval of time $t_1 < t < t_1 + \Delta$, but during the rest of the time it is equal to the initial value. In this case the solution is expressed by a degenerated hypergeometric and incomplete function. For this case, the detailed computation of one example is performed, which makes it possible to trace how the temperature at the various altitudes and various distances follows the temperature variation in the base surface. Particularly, it is ascertained that the influence of the variations of the temperature in the base surface extends practically to small altitudes: Already at the 200 m level this influence is hardly noticeable. In so far as the real variation of the temperature in the surface $z = 0$ can be approximated by a multitude of discrete variations, so the given example has also methodical significance.

L.S. Gandin

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SOV/169-59-6-6016

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 88 (USSR)

AUTHOR: Yermilov, S.N.

TITLE: On the Interconnected Transformation of Temperature and Humidity Fields in the Layer of Atmosphere Near the Ground

PERIODICAL: Uch. zap. Ivanovsk. gos. ped. in-t, 1958, Vol 18, pp 231 - 244

ABSTRACT: The temperature and humidity variation in a moving air mass is described by a known system of differential equations and the formal solution of this system is performed. The author proposes some simplification of the obtained formulae for a special case of the problem in question, assuming the variations of temperature and humidity to proceed in jumps. The calculation results of one example are cited.

M.Ye. Berlyand

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YERMILOV, S.N., Cand Phys-Math Sci (diss) Certain questions of the theory of the transformation of Air masses in the near ground layer of the atmosphere." Leningrad, 1960, 12 pp (Main Geophysical Observatory im A. I. Voyeykov) (KL, 34-60, 119)

YEFIMILOV, S.N.

Temperature-field transformation above an inhomogeneous underlying surface. Trudy Len.gidromet.inst. no.18:184-190 '63. (MIRA 18:1)

Temperature-field transformation and moisture above an inhomogeneous underlying surface. Ibid.:191-201

DUNIN-BARKOVSKIY, Lev Valerianovich; GELLER, S.Yu., doktor geograf. nauk, red.; YEMILOV, L.T., red.; PECHERKIN, I.V., tekhn.red.

[Physicogeographical principles of planning irrigation systems; zoning and water balance of the irrigated territory] Fiziko-geograficheskie osnovy proektirovaniia orositel'nykh sistem; raionirovanie i vodnyi balans oroshaemoi territorii. Pod red. S.IU.Gellera. Moskva, Izd-vo M-va sel'skogo khoz.SSSR, 1960. 166 p. (MIRA 13:8)

(Irrigation)

MERENOV, Igor' Vladimirovich; SHMUKER, Anatoliy Lazarevich; YERMILOV, L.T., kapitan 2 ranga, red.; KALACHEV, S.G., tekhn. red.

[Inflatable lifesaving apparatus for use at sea] Naduvnye spasatel'nye sredstva na more. Moskva, Voenizdat, 1963. 101 p. (MIRA 16:7)

(Lifesaving apparatus)

BOGDANOV, Arkadiy Mikhaylovich; YERMILOV, L.T., red.

[Cargo transshipment to ships at sea] Peredacha gruzov korabliam na khodu. Moskva, Voenizdat, 1964. 92 p.
(MIRA 18:1)

GORDEYEV, Leonid Ivanovich; ZAKOLODYAZHNYY, Vitaliy Ivanovich; SUVOROV, Yevgeniy Fedorovic ; FUFAYEV, Vadim Alekseyevich; CHUROV, Yevgeniy Petrovich; YERMILOV, L.T., red.

[Space beacons in navigation] Kosmicheskie maiaki v navigatsii. Moskva, Voenizdat, 1964. 201 p. (MIRA 17:9)

KABOZOV, S., kand.sel'skokhoz.nauk; TARASINSKIY, G.; YERMILOV, N.

Using synthetic urea and manganese in mixed feeds. Muk.-elev. prom. 25 no.7:21-22 Jl '59. (MIRA 12:11)

1. Glavnyy inzhener Orenburgskogo kombikormovogo zavoda (for Tarasinskiy). 2. Nachal'nik otdela tekhno-khimicheskogo kontrolya (for Yermilov).
(Feeds) (Urea) (Manganese)

Yermilov, N.

PETROVSKIY, A., nauchnyy sotrudnik; TARASINSKIY, G., inzhener; YERMILOV, N., inzhener.

Measuring out components of mixed feeds. Muk.-elev. prom. 22 no.8: 22-25 Ag '56. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki (for Petrovskiy). 2. Chkalovskiy kombikormovyy zavod (for Tarasinskiy and Yermilov).
(Feeding and feeding stuffs)

YERMILOV, M.A.; SEMENOV, G.M.

Improve planning of shop work. Sbor.der.transp. 36 no.12:69-71 D '56. (MLRA 10:2)

1. Sekretar' partiynogo komiteta parovoznogo depo Ulan-Udskoy Vostochno-Sibirskoy dorogi (for Yermilov). 2. Glavnyy bukhgalter depo Ulan-Udskoy Vostochno-Sibirskoy dorogi (for Semenov).
(Locomotives--Repairs)

SOV/124-57-4-4454

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 84 (USSR)

AUTHORS: Milin, V. B., Yermilov, N. D.

TITLE: The Effect of Turbulence on the Conductivity of Air Under the Action of Electric Fields (Vliyaniye turbulentnosti na provodimost' vozdukha pod vozdeystviyem elektricheskikh poley)

PERIODICAL: Uch. zap. Kirovskiy ped. in-t, 1954, Vol 1, Nr 8, pp 21-28

ABSTRACT: A presentation and analysis of the results of special experiments on the artificial ionization of atmosphere performed primarily in order to study the effects of turbulent mixing on the electrical conductivity of the atmospheric surface layer. The method of artificial ion dissemination is suitable for the evaluation of the turbulent exchange coefficient in the surface layer of the atmosphere: A definite relationship exists between the turbulent exchange coefficient (with a given stratification of the ground layer) and the ratio between the conductivity values of two levels situated at an equal distance from a linear ion source. Similar experiments carried out in 1954 demonstrated that the turbulent exchange coefficients determined on the basis of ion-disseminator data and gradient observations have fairly close values and

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The Effect of Turbulence on the Conductivity of Air Under the Action (cont.)

exhibit a consistent behavior in the course of different experiments. Apparatus employed for the artificial ion-dissemination and the measurement of conductivity is described. Experiments were also conducted with a plane (vertically arranged) source of ions.

L. S. Gandin

Card 2/2

YERMILOV, N.D.

USSR/Physics of the Atmosphere - Atmospheric Electricity, M-

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36201

Author: Yermilov, N. D., Krasnov, B. I.

Institution: None

Title: Certain Refinements to the Theory of the Vertical Distribution of the Intensity of the Atmospheric Electric Field in Normal Days

Original Periodical: Uch. zap. Kirovskovo ges. ped. in-ta, 1955, No 9, 171-182

Abstract: An analysis is made of the variation of the intensity of the electric field with altitude in days characterized by weak winds and insignificant cloudiness in the absence of precipitation. This problem is solved under the following [redacted]. 1. The entire atmosphere is arbitrarily divided into a surface layer and the free atmosphere. 2. In the surface layer the electric conductivity is constant, and in the free atmosphere it varies exponentially $\lambda_z = \exp[\alpha(z-H)]$, where λ_z is the electric conductivity at altitude z, α a constant characterizing the variation of λ with altitude,

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USSR/Physics of the Atmosphere - Atmospheric Electricity, M-

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36201

Abstract: and H is the height of the surface layer. 3. The coefficient of turbulent mixing k(z) varies linearly with altitude in the surface layer $k(z) = k_1 z$, and remains constant outside the surface layer $k(z) = k_1 H$. 4. Under normal conditions the one-dimensional Poisson equation $d^2v/dz^2 = -4\pi\rho$ holds at any altitude (v is the potential of the electric field and ρ is the charge density). 5. At the boundary between the surface layer and the free atmosphere, the distribution of the space charge has no extremum, i.e., $d\rho/dz \neq 0$. Under these conditions, the following equations are determined for the variation of the field intensity with altitude:

$$y(z) = \frac{\sqrt{2}\delta H^{-D}}{\Delta}\left[(\sqrt{\delta}+1)D\sqrt{z}K_1(D\sqrt{z}) - (\sqrt{\delta}-1)H^{-2D}D\sqrt{z}I_1(D\sqrt{z})\right]\ldots$$

$$y(z) = \frac{2y_0 H^{-D}}{\Delta}\exp\left[\sqrt{\alpha}(H-z)\right]\left[1 + \frac{\exp\left[\sqrt{\alpha}(H-z)\right]}{\ldots}\right]. \quad \text{Here } y(z) \text{ and } y_0$$

are the field intensities at altitude z and at the earth's surface; K_1 and I_1 are the McDonald and Bessel functions; $D = 4\sqrt{\pi\lambda/k_1}$; $\Delta = 2\delta H^{-D} + \sqrt{\delta} + 1$, and $\delta = 4\pi\lambda/k_1 H^2$. These relationships can be used to determine the coefficient of turbulence.

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AUTHORS: Yermilov, N. G., Technician SOV/91-59-2-22/33

TITLE: A Device for the Impregnation of Wood under Local Conditions (Ustanovka dlya propitki drevesiny v mestnykh usloviyakh)

PERIODICAL: Energetik, 1959, Nr 2, pp 29 - 31 (USSR)

ABSTRACT: The author describes a diffusion impregnation process of wood with creosole oil by a locally constructed (at a cost of 2,500 rubles) impregnating device. Impregnation of one wood item took 60 - 70 min. The depth of penetration of the antiseptic reached 25 - 35 mm. Two workers operating the device impregnated 2m^3 of wood per workday. There are two photos and 1 diagram.

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SHEVELEV, Aleksey Petrovich; KUZNETSOV, P.V., red.; YEMELOV, N.G., spetsred.; POKSHAREVA, A.A., tekhn.red.

[Precast construction and its economic effectiveness] Sbornoe stroitel'stvo i ego ekonomicheskaia effektivnost'. Moskva, Gosplanizdat, 1960. 157 p. (MIRA 13:7)
(Precast concrete construction)

YERMILOV, M.G., tekhnik

Switching point instead of a dead spur line on a 35 kv. electric transmission line. Energetik 8 no.7:33 Jl '60. (MIRA 13:8)
(Electric power distribution)

YERMILOV, N.G., tekhnik

Melting of ice from the lightning protection lines of 110 kv. overhead electric power transmission lines. Energetik 10 no.1:23-24 Ja '62. (MIRA 14:12)
(Electric lines--Overhead)

ANICHKOV, M.N. (Leningrad, Mokhovaya ul.,d.28,kv.26); BALYUZEK, F.V.; BURMISTROV, M.I.; PISAREV, Yu.F.; YERMILOV, N.I.

Resection and transplantation of a segment of the arch of the aorta with its branches (the carotid and subclavian arteries). Grud. khir. 3 no.1:9-13 Ja-F '61. (MIRA 16:5)

1. Iz khirurgicheskoy klinniki dlya usovershenstvovaniya vrachey No.1 (nachal'nik - deystvitel'nyy chlen AMN SSSR prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(CAROTID ARTERY--SURGERY) (SUBCLAVIAN ARTERY--SURGERY)
(AORTA--SURGERY)

BALYUZEK, F.V., kand.med.nauk; SHANIN, Yu.N., kand.med.nauk;
BUNNISTROV, M.I.; YERMILOV, N.I.; KARIMOVA, T.V.

Use of extracorporeal circulation in experimental open heart surgery. Vest.khir. 87 no.11:24-30 N '61. (MIRA 15:11)

1. Iz 1-y khirurgicheskoy kliniki usovershenstvovaniya vrachey i kafedry anesteziologii (nach. - prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.
(PERFUSION PUMP (HEART))

OTCHENASHENKO, I.M.; NEYMARK, V.M.; YERMILOV, N.K.; YEGOROV, B.N.

Volume microdilatometer for investigating phase transitions.
Zav. lab. 29 no.10:1260-1261 '63. (MIRA 16:12)

1. AN SSSR i Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova.

S/076/62/036/001/011/017
B124/B110

AUTHORS: Yegorov, B. N., Yermilov, N. K., and Otchenashenko, I. M.

TITLE: New thermal setup for phase analysis of small specimens

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 1, 1962, 170-175

TEXT: A new setup securing uniform heating and cooling over a wide temperature range at an adjustable rate is described. The setup, designed for use in thermal analysis, was developed at the Design Office mentioned under Association. A block diagram, including a thermal block (Fig. 2), temperature control equipment, an ЭР-С-К (ER-S-K) electronic controller furnished by the factory "Komega", and an СН-120 (SN-120) voltage regulator, is shown in Fig. 1. Uniform temperature changes over the range from -150 to 350°C at rates between 0.1 and 6.4°/min can be obtained The thermal block is an enclosed all-metal stainless steel chamber with its upper flange 4 fastened to bearing disk 3. A platinum thermocouple 13 is provided at the bottom to control the temperature within the block. Further components of the thermal block are: electrical heater 15, metallic holder 2, heat reflectors 5, and measuring rod 9. All thermal

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