SHUL'GIN, Konstantin Aleksandrovich; BERG, A.I., redaktor; DZHIGIT, I.S., redaktor; KULIKOVSKIY, A.A., redaktor; SMIRNOV, A.D., redaktor; TARASOV, F.I., redaktor; TRAMM, B.F., redaktor; CHECHIK, P.O., redaktor; SHAMSHUR, V.I., redaktor; MEL'NIKOVSKAYA, R.D., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor.

[How a radio receiver works] Kak rabotaet radiopriemnik. Moskva, Gos. energ. izd-vo, 1956. 78 p. (Massovaia radiobiblioteka, no.242)
(Radio--Receivers and reception)

MAYOROV, Fedor Vasil'yevich; SHUL'GIN, K.A., red.; MEDVEDEV, L.Ya., tekhn. red.

[Electronic calculating apparatus; elements and designs] Elektronnye tsifrovye vychislitel'nye ustroistva; elementy i skhemy. Moskva, Gos. energ. izd-vo, 1957. 159 p. (Massovaia radiobiblioteka, no.285) (MIRA 11:2)
(Calculating machines)

SHUL'GIN, K.

Equivalent circuits and parameters for transistors. Radio no.11:60-63 N '57. (MIRA 10:10)

(Transistors)

9(4) PHASE I BOOK EXPLOITATION SOV/1823

Shul'gin, Konstantin Aleksandrovich

Ekvivalentnyye skhemy i sistemy parametrov poluprovodnikovykh triodov (Equivalent Circuits and Parameter Systems of Transistors) Moscow, Gosenergoizdat, 1958. 87 p. (Series: Massovaya radio-biblioteka, vyp. 309) 50,000 copies printed.

Editorial Board: A.I. Berg, F.I. Burdeynyy, V.A. Burlyand, V.I. Vaneyev, Ye. N. Genishta, I.S. Dzhigit, A.M. Kanayeva, E.T. Krenkel', A.A. Kulikovskiy, A.D. Smirnov, F.I. Tarasov, and V.I. Shamshur.

Ed.: R.D. Mel'nikovskaya; Tech. Ed.: K.P. Voronin.

PURPOSE: This booklet is intended for radio amateurs. It may also be useful to engineers working with semiconductor equipment.

COVERAGE: The author discusses basic parameters and equivalent circuits of junction transistors and describes methods of

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measuring parameters and determining equivalent circuit elements. He also presents examples illustrating the use of equivalent circuit parameters for practical purposes. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 3/3

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7-1-59

GANZBURG, Mark Davydovich; SHUL'GIN, K.A., red.; BORUNOV, N.I., tekhn. red.

[Improving phonation of receivers] Uluchshenie zvuchaniia priemnika. Moskva, Gos. energ. izd-vo, 1958. 94 p. (Massovaia radiobiblioteka, no.299) (MIRA 11:7)

(Radio--Receivers and reception)

MIRONOVICH, Aynbinder Iosif; SHUL'GIN, K.A., red.; BORUKOV, N.I., tekhn.red.

[Problems of the theory and design of ultrashortwave stages of radio receivers] Voprosy teorii i rascheta UKV kaskadov radioveshatel'nogo priemnika. Moskva, Gos.energ.izd-vo, 1958. 117 p. (MIRA 11:12)
(Radio, Shortwave--Receivers and reception)

BOBROV, Nikolay Vasil'yevich; SHUL'GIN, K.A., red.; VORONIN, K.P., tekhn.red.

[Radio receiving systems] Radiopriemnye ustroistva. Moskva, Gos.energet.izd-vo, 1958. 447 p. (Massovaia radiobiblioteka. Uchebnaia seriia, no.292) (MIRA 12:8)
(Radio--Receivers and reception)

AUTHOR: Shul'gin, K. 107-58-3-33/41

TITLE: Equivalent Transistor Circuits for Wide Frequency Ranges (Ekvivalentnyye skhemy poluprovodnikovykh triodov dlya shirokogo diapazona chastot)

PERIODICAL: Radio, 1958, Nr 3, pp 52 - 55 (USSR)

ABSTRACT: In "Radio", 1957, Nr 11, the parameters of equivalent transistor circuits for low frequencies were described. In this article, the author deals with equivalent transistor circuits for a wide frequency range, explaining some of the theoretical aspects leading to the circuit arrangements shown in Figure 3. Data on equivalent circuits are furnished for transistors "P6B", "P6V" and "P6G". The article concludes with explanations of the frequency dependance of the basic transistor parameters. There are 6 sets of circuit diagrams, 1 table and 4 graphs.

1. Transistors--Circuits--Theory

Card 1/1

AUTHOR: Shul'gin, K. 107-58-5-30/32

TITLE: Determination of Transistor Parameters (Opredeleniye parametrov poluprovodnikovykh triodov)

PERIODICAL: Radio, 1958, Nr 5, pp 58 - 60 (USSR)

ABSTRACT: The author discusses methods by means of which radio amateurs may determine data for all elements of an equivalent transistor system, and measure its basic characteristics. The author lists several mathematical formulae and circuit diagrams which are useful for this purpose.
There are five figures and one table.

AVAILABLE: Library of Congress

Card 1/1

BURDEYNYY, Fedor Ivanovich (UA3-1); KAZANSKIY, Nikolay Valentinovich (UA3AF); KAMALYAGIN, Aleksandr Fedorovich (UA41F); SHUL'GIN, Konstantin Aleksandrovich (UA3DA); VASIL'YEV, A.A., red.; TROITSKIY, L.V., red.; KARYAKINA, M.S., tekhn.red.

[Shortwave radio manual; reference manual and methods aid for radio amateurs] Spravochnik korotkovolnovika; spravochno-metodicheskoe posobie dlia radioliubitelei. Izd.3., perer. i dop. Moskva, Izd-vo DOSAAF, 1959. 479 p. (MIRA 13:1)
(Radio, Shortwave)

ALEKSANDROV, G.A.; DORRER, I.A.; MALOCHINSKIY, O.M.; KHLYTCHIYEV, S.M.; CHISTYAKOV, N.I.; SHUL'GIN, K.A.; VENGRENYUK, L.I., red.; MARKOCH, K.G., tekhn. red.

[Radio communications and broadcasting] Radiosviaz' i veshchanie. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 503 p. (MIRA 15:2)
(Radio—Receivers and reception)
(Radio—Transmitters and transmission)

ACCESSION NR: AP4010376 S/0107/64/000/001/0022/0024

AUTHOR: Shul'gin, K.

TITLE: Disk electromechanical filter for SSB

SOURCE: Radio, no. 1, 1964, 22-24

TOPIC TAGS: electromechanical filter, disk electromechanical filter, EMF-D-500-3V electromechanical filter, electromechanical filter design, electromechanical filter application

ABSTRACT: A short description of an EMF-D-500-3V Soviet-made electromechanical filter is offered: rated frequency, 500 kc; (upper sideband) passband, 3.1 kc. The functioning principle is explained. The design is clearly illustrated by Enclosure 1; the filter consists of 9 resonators, 8.5-mm diameter and 1.82-1.87-mm thick with a 1-mm spacing between them. All resonators are interconnected by 0.25-mm wire links. The passband attenuation is under 15 db

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ACCESSION NR: AP4010376

(actually, 7-10 db); frequency-characteristic variation, 3 db; passband at 60 db, less than 5 kc. A parallel-supply circuit is recommended for electron-tube stages whose anode current is over 1 or 2 ma. The electromechanical filter is sensitive to external magnetic fields; hence, shielding is recommended. Electric oscillatory circuits must be accurately tuned, otherwise the filter transmission factor is impaired and the frequency response becomes nonuniform. To be continued. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 11Feb64	ENCL: 01
SUB CODE: CO, GE	NO REF SOV: 000	OTHER: 000

Card 2/2

LOSEV, Aleksey Konstantinovich; SHUL'GIN, K.A., otv. red.;

[Theory and design of electromechanical filters] Teoriia i raschet elektromekhanicheskikh fil'trov. Moskva, Sviaz', 1965. 262 p. (MIRA 18:8)

SHULGIN, K.B.

"Automatic Control of a Closed-Cycle Hydrocompressor," Report submitted at the Second All-Union Conference on Automatic Control Theory, Moscow, 1953

Sum 1467

SHUL'GIN, K. B.

SHUL'GIN, K. B. "Automatic regulation of closed-cycle hydrocompressors." Min Higher Education Ukrainian SSR. Donets Order of Labor Red Banner Industrial Inst imeni N. S. Krushchev. Stalino, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya letopis', No. 15, 1956. Moscow.

SHUL'GIN, K.B.

Theoretical investigation of a hydrocompressor with a closed water cycle equipped with an automatic regulator [with summary in English]. Avtomatyka no.4:21-35 '57. (MIRA 11:1)

1. Donets'kiy industrial'niy institut im. M.S. Khrushcheva.
(Hydraulic machinery) (Automatic control)

L 15766-63 EWT(m)/BDS S/0076/63/037/008/1857/1859

ACCESSION NR: AP3004983

50

AUTHOR: Shul'gin, L. P.; Koz'min, Yu. A.

TITLE: Kinetics of Eu(III)-Eu(II) oxidation-reduction

SOURCE: Zhurnal fiz. khimii, v. 37, no. 8, 1963, 1857-1859

TOPIC TAGS: europium(II), europium(III), oxidation-reduction potential, standard oxidation-reduction potential, equilibrium constant, electromechanical process, reduction, reduction method, temperature, pH, concentration, oxidation, reduction

ABSTRACT: The oxidation-reduction potential (φ), equilibrium constant (K), and temperature dependence of the equilibrium constant have been determined electrochemically for the Eu^{3+}/Eu^{2+} system, and the effect of pH and impurities on this constant has been studied. The research was undertaken in view of its applicability to the isolation of Eu by reduction methods. The φ measurements were conducted in constantly mixed 1 N $EuCl_3$ solutions, containing various low concentrations of $EuCl_2$, in a special electrolytic cell in a hydrogen atmosphere. A platinum electrode and a calomel reference electrode were used. It was found

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KOZ'MIN, Yu.A.; SHUL'GIN, L.P.; PONOMAREV, V.D.

Solubility product of bivalent europium sulfate. Zhur. neorg. khim. 9 no.11:2532-2535 N '64 (MIRA 18:1)

1. Laboratoriya redkikh i redkozemel'nykh metallov Vsesoyuznogo gornometallurgicheskogo nauchno-issledovatel'skogo instituta tsvetnykh metallov.

29303
S/084/61/000/011/001/001
D036/D114

6,1140

AUTHORS: Maksimov, M., Airport Chief (see Association); Shul'gin, M., Ground Services Engineer; Shmel'kov, A., Scientific Worker

TITLE: The fog recedes...

PERIODICAL: Grazhdanskaya aviatsiya, no. 11, 1961, 19

TEXT: The authors discuss experience gained at the Alma-Atinskiy aeroport (Alma-Ata Airport) in the dispersal of supercooled fogs by dry ice. Supercooled fogs appear at the Alma-Ata Airport, which is situated close to the foothills of the Zailiyskiy Alatau Range, from December to February, normally arising before dawn and lasting for several hours or even the entire day. They appear more frequently in some years than others. The first attempts to disperse these fogs with dry ice at the Alma-Ata Airport were made in 1953, when carbon dioxide in a liquid state was put into canvas bags, where it solidified. Then it was dropped from a Ли -2 (Li-2) sounding aircraft. Although the experiments were successful, the method was discarded due to difficulties in the preparation, storing and spraying of the dry ice. After this, the "Метель-55" ("Metel'-55") airborne carbon dioxide unit, developed by the Gosu-

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The fog recedes ...

darstvennyy nauchno-issledovatel'skiy institut Grazhdanskogo vozdushnogo flota (State Scientific Research Institute of the Civil Air Fleet [GosNII GVF]), was introduced at the airport. The unit worked on liquid carbon dioxide and was used at the airport until 1960, when it was replaced by an improved model, the "Metel'-59", which is still being used. It was found that with the "Metel'" units often a single spraying was sufficient to obtain a window until the fog was evaporated naturally by the Sun, as most of the supercooled fogs at the airport arise either during a dead calm or a very gentle wind of about one meter per second. Despite the effectiveness of the airborne units, it was found difficult to organize constant operational preparedness of the aircraft, equipment and the crew. In recent years, ground equipment, also developed by the GosNII GVF, was therefore used at the same time as the airborne units. Stationary units placed at the near approaches to the airfield proved unsatisfactory: the units could not be switched from one place to another in case of wind changes, and it was difficult to attend four or five widely separated units. In 1961, experiments with compact mobile units were therefore started. These units dispersed the fog while moving at 15-30 km/hr along roads bordering the airfield at a distance of

The fog recedes ...

1 to 2 kilometers from the runway, as well as along the taxiways. On one January day, a single mobile unit working for about one hour dispersed a homogeneous fog, which had covered the entire airport and the surrounding area and in which the visibility was 50 to 100 m. One 25-kg container of liquid carbon dioxide was used up in the process. Discussing the advantages and disadvantages of airborne and ground units, the authors point out that airborne units can be used to disperse clouds as well as fogs, but their application is more complicated and costly. The ground units are more effective against ground fogs, and can be used if there are suitable roads near the airport; it is stressed that they are practical, simple, reliable and economical and are the only real means of combatting winter fogs if there is no sounding aircraft available. On the basic of the experience gained at the airport, the following recommendations are made: (a) carbon dioxide units should be used as widely as possible to combat supercooled and warm fogs and thus improve the regularity of flights; (b) carbon dioxide units can be used only to disperse innermass clouds and fogs at temperatures of -5°C, and below; they should therefore be used at airfields where the anticyclonic type of weather prevails in the cold season, i.e. the eastern part of the European territory of the USSR, Kazakhstan, and Siberia; (c) as ground fogs

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The fog recedes ...

cause the greatest disruption of the regularity of flights in these regions, simple and economical mobile ground carbon dioxide units should be used there.

ASSOCIATION: Alma-Atinskiy aeroport (Alma-Ata Airport) (Maksimov, M. and Shul'gin, M.); GosNII GVF (Shmel'kov, A.)

X

Card 3/4

SHUL'GIN, M.F., dotsent, kandidat fiziko-matematicheskikh nauk.

Method of redundant coordinates in analytical mechanics. Biul. SAGU no.30:141-165 '48. (MLRA 9:5)
(Coordinates) (Mechanics, Analytic)

SHUL'GIN, M.F., kandidat fiziko-matematicheskikh nauk.

Integration of dynamic equations of S.A.Chaplygin. Trudy Inst.mat.i mekh. AN Uz.SSR no.5:119-128 '49. (MLRA 6:12)
(Dynamics) (Differential equations, Partial)

SHUL'GIN, M.F.

Curvature of the trajectory of a nonholonomic mechanical system in the function of generalized coordinates. Trudy SAGU 17:147-153 '50. (MLRA 9:5)

(Dynamics)

SHUL'GIN, M.F.

Method of quasi-coordinates in mechanics. Trudy SAGU 17:155-164 '50. (MLRA 9:5)

(Motion)

SHUL'GIN, M.F.

/Šul'gin, M. F. Reduction of systems of differential equations to the form of Lagrange. Doklady Akad. Nauk SSSR (N.S.) 75, 349–351 (1950). (Russian)

If $\dot{q}_k = f_k(t; q_i; \dot{q}_i)$, $i, k = 1, \cdots, n$, and

$$L = \sum_i \dot{q}_i q_{n+i} + \sum_i f_i q_{n+i},$$

the last n Lagrange equations derived from L coincide with the original system, while the first n define the q_{n+i}. In the special case when f_k does not contain any q_i, all the q_i are cyclic variables in L and Routh's reduction results in a Lagrangian system [derived from $R = L - \sum \dot{q}_i(\partial L/\partial \dot{q}_i)$] in q_{n+i} alone. A particular solution of the latter yields the general solution of the original system in the form $q_i = -\int (\partial R/\partial c_i)\, dt$, $c_i = a_i$.

A. W. Wundheiler.

Source: Mathematical Reviews, Vol 12 No. 6

SHUL'GIN, M.F.

Šul'gin, M. F. **Generalization of Poisson's theorem to the case of holonomic non-conservative systems.** Doklady Akad. Nauk SSSR (N.S.) 81, 23–26 (1951). (Russian)

Let the Hamiltonian equations of a nonconservative holonomic dynamical system be

(1) $\dot{q}_i = \partial H/\partial p_i$, $\dot{p}_i = -\partial H/\partial q_i + Q_i$, $i = 1, \cdots, n$,

where H and Q_i are known functions of the coordinates q_i, the impulses p_i and time t. Introduce supplementary coordinates u_i and impulses s_i and put

$$K = \sum (\partial H/\partial p_i) s_i + \sum (\partial H/\partial q_i - Q_i) u_i.$$

Then, with $K(t; q_i; p_i; u_i; s_i)$ as the Hamiltonian function, the system (1) assumes the form

(2) $\dot{q}_i = \partial K/\partial s_i$, $\dot{p}_i = -\partial K/\partial u_i$, $i = 1, \cdots, n$,

and the u_i and s_i are determined by the equations

(3) $u_i = \partial K/\partial p_i$, $\dot{s}_i = -\partial K/\partial q_i$, $i = 1, \cdots, n$.

The results of the paper can be summarized as follows. Let $f(q_i; p_i; t) = \text{const.}$ and $\varphi(q_i; p_i; u_i; s_i; t) = \text{const.}$ denote two integrals of the system (1) and of the extended system (2) and (3) respectively. Then, if the substitution $u_i = \partial f/\partial p_i$, $s_i = -\partial f/\partial q_i$ is made, the equation $(f, \varphi) = \text{const.}$, where (f, φ) denotes the Poisson's bracket-expression of the functions f and φ, constitutes, in general, a new integral of the original system (1). If, in particular, $f(q_i; p_i; t) = \text{const.}$ is an integral of a nonconservative scleronomic system (1), then $\partial f/\partial t = \text{const.}$ is also an integral of this system, and consequently, $\partial^2 f/\partial t^2 = \text{const.}$, and so on, are integrals.

The theory is illustrated by an example of a free motion of a material point with unit mass in a resisting medium (the resistance being proportional to the velocity), and attracted by a force proportional to the distance from the origin.

E. Leimanis (Vancouver, B. C.).

Source: Mathematical Reviews, Vol 13 No. 6

SHUL'GIN, M.F.

3980

Šul'gin, M. F. On the theory of the Lagrange equations for nonconservative systems. Doklady Akad. Nauk SSSR (N.S.) 83, 373–376 (1952). (Russian)

This paper is a continuation of an earlier one by the author [same Doklady 81, 23–26 (1951); these Rev. 13, 594], and establishes a theorem, analogous to the classical theorem of Poisson, on integrals of Lagrangian equations for non-conservative systems. By the introduction of superfluous variables the given Lagrangian system is replaced by an extended one. Given an integral of each system, the theorem provides a new integral of the original one. If the given integral of the original system is linear with respect to the velocities, the corresponding extended system can be reduced to the Lagrangian form with respect to the superfluous variables. *E. Leimanis* (Vancouver, B. C.).

Central Asiatic State U, Tashkent

Source: Mathematical Reviews, Vol. 13 No.10

USSR/Mathematics - Equations of Dynamics 21 May 52

"Poisson's Theorem for Equations of Dynamics With Multipliers of Connections," M. F. Shul'gin, Cen Asia State U, Tashkent

"Dok Ak Nauk SSSR" Vol LXXXIV, No 3, pp 453-456

Shows that Poisson's classical theorem is applicable to the eqs of dynamics with multipliers of connections for holonomic conservative systems. Previously theorems (other than those of G. K. Suslov) relating to integration of subject eqs had not received any development even for holonomic systems because of the difficulties arising out of the presence of indeterminate

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multipliers in the eqs of motion. (Suslov had constructed partial-differential eqs and proposed methods for completely integrating the Hamilton-Jacobi in subject case.) Submitted by Acad A. I. Nekrasov 25 Mar 52.

225T52

USSR/Mathematics - Dynamical Equations, 11 Jun 52
Poisson's

"Theorem Concerning the Properties of the Integrals of S. A. Chaplygin's Dynamical Equations," M. F. Shul'gin, Cen Asian State U, Tashkent

"Dok Ak Nauk SSSR" Vol LXXXIV, No 5, pp 899-902

Establishes a theorem analogous to Poisson's classical theorem. S. A. Chaplygin had shown in 1933 that in many examples of conservative nonholonomic systems one can select the generalized coordinates q such that the coordinates q do not enter either the coeffs B_{rs} of kinematic connection or the expression of kinetic

223T76

potential L_0, and showed that the eqs of motion of such systems can be in certain unique form. The resulting Chaplygin dynamical eqs are studies here. Submitted by Acad A. I. Nekrasov 11 Apr 52.

223T76

SHUL'GIN, M. F.

1. SHUL'GIN, M. F.

2. USSR (600)

4. Differential Equations

7. Certain properties of integrals of ordinary differential equations. Dokl.AN SSSR, 87, no. 5, 1952.

Development of works (DAN SSSR 81, No.1, 1951; 83, No.3, 1952); DAN Uzbek SSSR, No.10, 1951 in which the author discussed the eqs of motion holonomic nonconservayive and nonholomonic mech systems and established methods for integrating these eqs, which metho s are similar to Poisson's. In this article he considers the system of second-order ordinary differential eqs of the form: $\dot{x}_k = X_k(t; x_1, \ldots, x_n)(k = 1, 2, \ldots, n)$ and establishes some theorems concerning the properties of the integrals of these eqs. Presented by Acad A. I. Nekrasov 11 Oct 52.

254T99

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

SHUL'GIN, M. F.

"Theorem on the Properties of the Integrals of a System of Differential Equations Analogous to the Classical Theorem of Poisson"

Doklady Akad Nauk Uzbek SSR, No.3, 1953, pp 8-12

abs

W-31098, 26 Nov 54

SHUL'GIN, M. F.

General Mechanics, Mechanics of a System (3222)

Doklady Akademii Nauk Uzbek SSSR, No 9, 1953, pp 7-12

Shul'gin, M. F.
Equations of Motion for Holonomic Nonconservative Systems With a Linear Integral

(No abstract given.)

Referativnyy Zhurnal -- Mekhanika, No 5, 1954 (M-30976)

SHUL'GIN, M.F.

Analytical dynamics in quasicoordinates. Trudy Inst. mat. i mekh. AN Uz.SSR no.10:191-195 part 2. '53. (MLRA 8:4)
(Dynamics)

SHUL'GIN, M. F.

"Generalization of Poisson's Theorem for Any System of Differential Equations" (Differential Equations, Ordinary Differential Equations) Dokl. AN Uzb. SSR. No 11, 1953, pp 3-7 (Uzbek resume)

Abs

W-31146, 1 Feb 55

[redacted], N. P.

Dissertation: "On Certain Differential Equations of Analytic Dynamics and Their Integration." Dr Phys-Math Sci, Inst of Mechanics, Acad Sci SSR, May 54. (Vechernyaya Moskva, Moscow, 28 Apr 54)

SO: SuM 245, 19 Oct 1954

SHUL'GIN, M.F. (Tashkent)

Chaplygin's dynamic equations in the presence of conditional non-integrable equations. Prikl. mat. i mekh. 18 no.6:749-752 N-D '54. (MLRA 8:3)
(Kinematics)

SHUL'GIN, M.F.

Reduced kinetic potential of differential equation systems. Trudy SAGU no.37 '54 [i.e. '53] (MLRA 10:3)
(Dynamics) (Differential equations)

SHUL'GIN, M. F.

"Investigating the Motion of Nonholonomic Mechanical Systems in Surplus Coordinates," by M. F. Shul'gin, Tr. Sredeaz. un-ta, No 37, 1954, pp 49-58 (from Referativnyy Zhurnal--Mekhanika, No 11, Nov 56, Abstract No 7161)

"The addition to some given coordinates of an equal number of supplementary ('surplus') coordinates can result, as the author shows, in a system of the type

$$\ddot{q}_k = f_k (t, q_1, \ldots, q_n, \dot{q}_1, \ldots, q_n) \quad (k = 1.2, \ldots, n)$$

in a second order Lagrange equation. An expansion of the Liouville type is, moreover, used; the effectiveness of this method is doubtful. The author applies this expansion to nonholonomic systems, introducing the concept of the 'holonomized kinetic potential.' As a result, a Lagrange system emerges having twice the number of unknowns. The author examines the case of the presence of cyclic coordinates, as well as S. A. Chaplygin's well-known example (the computations are not carried to their termination, thus hindering comparison with the existing solution). In conjunction with the doubling of the system, there emerge excess arbitrary constants during integration; their role remains unexplained."

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SHUL'GIN, M.F.

Some properties of integrals of P.V.Voronets' dynamic equations. (MLRA 10:3)
Trudy SAGU no.54:131-136 '54.
(Dynamics) (Equations)

SHUL'GIN, M.F.

Methods analagous to the Hamilton-Jacobi method for integrating a system of differential equations with cyclic variables. Trudy SAGU no.66:55-60 '56. (MLRA 10:1)
(Differential equations)

S/044/60/000/008/015/035
C111/C222

16.3500

AUTHOR: Shul'gin, M.F.

TITLE: On some differential equations of analytic mechanics and their integration

PERIODICAL: Referativnyy zhurnal. Matematika, no.8, 1960, 95-96, abstract no. 8907. Tr. Sredneaz. un-ta, 1958, no.144, 183p.

TEXT: The paper consists of five chapters and an appendix. Chapter 1 is devoted to the representation of the analytic mechanics of a holonomous system in non-holonomous coordinates. In chapter 2 the author establishes equations of the type of Lagrange and Hamilton for holonomous systems in surplus coordinates. It is shown that it always is possible to establish generalized Lagrange equations of the type 2.14 (p.20) for arbitrarily many coordinates q_i, where these equations go over in the usual Lagrange equations of second kind if all considered coordinates q_i are independent. In chapter 3 the methods of the holonomous conservative systems are extended to holonomous but not conservative systems. For this aim the author generalizes the notion of the kinetic potential L to non-conservative systems and establishes the system of equations 3.17 which is analogous to the Lagrange equations of second

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On some differential equations...

kind and which distinguishes from them by the fact that here the Routh-function plays the part of the Lagrange function L. Furthermore the author obtains the equations 3.37 and 3.38 which are analogous to the canonical equations of Hamilton, and the equation 3.39 which is analogous to the equation of Jacobi-Hamilton. The chapters 4 and 5 treat non-holonomous systems. In chapter 4 the author also uses the method of the surplus coordinates. He considers several types of motion equations for linear non-holonomous connections, namely: the generalized Lagrange equation with multipliers of the connection 4.8, equations of P.V. Voronets 4.11, and equations of S.A.Chaplygin 4.12. The method of Routh is extended to equations of Voronets and Chaplygin, and it is shown that for the presence of K cyclic coordinates the number of coordinates in the considered equations always can be diminished by K (similar as for holonomous systems). Chapter 5 treats the theory of non-holonomous systems with non-linear connections. For arbitrary non-holonomous systems the author establishes the equations

$$\partial s/\partial \dot{q}_i = Q_i + \Delta_i \quad (i=1,2,\ldots,n) \qquad (5.39)$$

and calls these equations the most general equations of the dynamics.

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S/044/60/000/008/015/035
C111/C222

On some differential equations...

The equations (5.39) have the form of the equations of Appell, but they distinguish from them by the fact that the connections here may be completely arbitrary, while Appell only considers linear connections. In chapter 6 (appendix) there are 5 paragraphs. According to our opinion, most interesting are the paragraph 2, here the author extends the theorem of Jacobi-Hamilton to the Lagrange equations of first kind, as well as the last paragraph which contains three interesting problems which are solved with the aid of the surplus coordinates.

Reviewer's remark: The author does not mention the paper of P.I. Khristichenko (Uch. zap. Tadzh. un-ta, 1952) which contains equations very similar to (5.39). Besides, equations similar to (5.39) were obtained by the Bulgarian mathematician Tsenov (Dokl. AN SSSR, 1953, 39, no.1, 3); that is not mentioned by the author. Both above mathematicians obtained the equations (5.39) in a completely different manner also different from the method of M.F.Shul'gin (the equations (5.39) were published by M.F.Shul'gin at first in 1944). It must still be mentioned that it is not clear whether the theorem on the minimum of the characteristic function R is new or agrees in essential with the principle of the least constraint of Gauss (cf. § 36).

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S/044/60/000/008/015/035
C111/C222

On some differential equations...

Editor's remark: The equations 2.20, 2.59 of chapter II can easily be obtained from the equations of N.G.Chetayev (Dokl. AN SSSR, A, 1928, no.7), that is not mentioned by the author, so that the theorems of chapter II are special cases of the theorems of Poincaré-Chetayev.

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

X

Card 4/4

S/124/63/000/001/002/080
D234/D308

AUTHORS: Shul'gin, M.F. and Nagornov, V.A.

TITLE: Poincare-Voronets equations and their integration

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 1, 1963, 11, abstract 1A67 (Tr. Tashkentsk un-ta, 1961, no. 189, 155-176)

TEXT: The authors present some properties of Poincare's equation for holonomic systems, established by N.G. Chetayev. 15 references. (Abstracter's note: The authors' proposition that the structural coefficient c_{jki} for holonomic systems can be variable, is disproved by the theory of Lie's groups).
[Abstracter's note: Complete translation]

Card 1/1

ACCESSION NR: AT4017652 S/3021/62/000/209/0064/0072

AUTHOR: Shul'gin, M. F.

TITLE: The theory of the equations of dynamics in excess coordinates for nonconservative systems

SOURCE: Tashkent. Universitet. Nauchny*ye trudy*, no. 209, 1962. Matematicheskiye nauki (Mathematical sciences), no. 23, Mekhanika (Mechanics), 64-72

TOPIC TAGS: nonconservative system, excess coordinate, Holonomic mechanical system, Hamilton equation, Poisson method, Lagrange form

ABSTRACT: In certain problems it turns out to be convenient to determine the position of a mechanical system by parameters q, which in number are more than is necessary. In earlier papers the author has considered the setting-up and the integration of the equations of motion of holonomic mechanical systems in the excess coordinates. The characteristic property of these equations is that although they are set-up in the excess coordinates they do not contain coefficient constraints. In the present paper it is shown that in certain cases the equations of dynamics in the excess coordinates for holonomic, nonconservative systems may be reduced to the Lagrange form in the excess coordinates

Card 1/2

ACCESSION NR: AT4017652

with kinetic potentials, or to a combination of it and the Hamilton equation. These are then solved by the methods of Poisson, Hamilton-Jacobi, and others. Orig. art. has: 41 formulas.

ASSOCIATION: Tashkentskiy gosudarstvenny*y universitet im. V. I. Lenina (Tashkent State University)

SUBMITTED: 00	DATE ACQ: 23Mar64	ENCL: 00
SUB CODE: ME	NO REF SOV: 004	OTHER: 000

Card 2/2

ACCESSION NR: AT4017653 S/3021/62/000/209/0073/0080

AUTHOR: Shul'gin, M. F.

TITLE: Extended systems of Liouville and Poincare differential equations

SOURCE: Tashkent. Universitet. Nauchny*ye trudy*, no. 209, 1962. Matematicheskiye nauki (Mathematical sciences), no. 23, Mekhanika (Mechanics), 73-80

TOPIC TAGS: Poincare equation, Liouville equation, differential equation, ordinary differential equation, adjoint system

ABSTRACT: The present paper is an extension of an earlier paper by the author where he considered a system of ordinary differential equations of the form

$$\dot{x}_k = X_k(t; x_1, x_2, \ldots, x_n),\ k = 1, 2, \ldots, n,\ \dot{x}_k = \frac{dx_k}{dt} \quad (1)$$

and established certain theorems on the properties of the integrals of these equations. The classical theorems of Poisson and Boole were obtained as special cases of these theorems. In the present paper, in the first section certain auxiliary facts are established for the adjoint system, for the extended Liouville system, and for the extended Poincare system. In the second section certain

Card 1/2

ACCESSION NR: AR4034719 S/0124/64/000/003/A009/A009

SOURCE: Ref. zh. Mekhan., Abs. 3A64

AUTHOR: Shul'gin, M. F.

TITLE: Conditions for the applicability of the Hamilton-Jacobi method for the integration of the equations of dynamics with coupling multiples

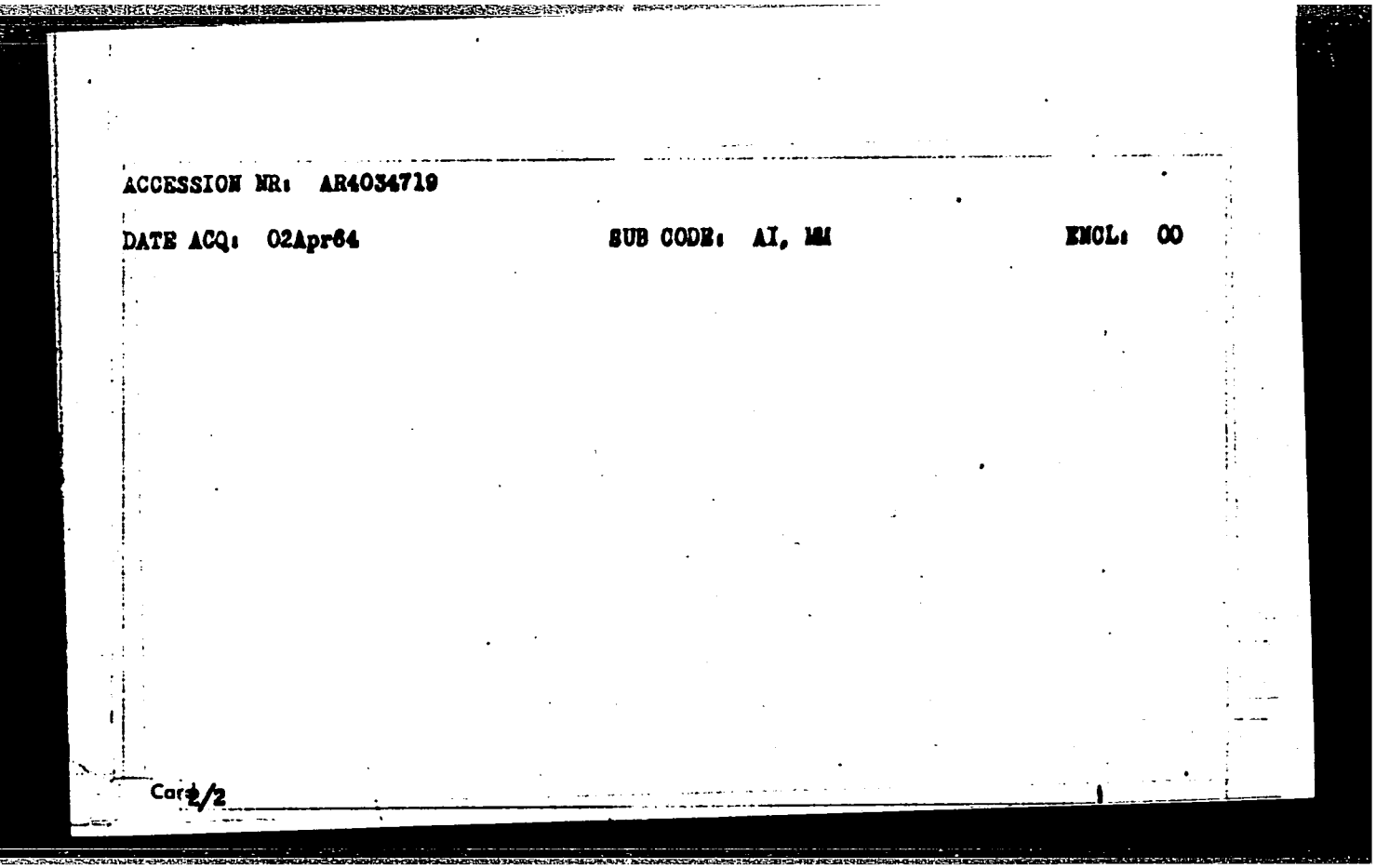
CITED SOURCE: Nauchn. tr. Tashkentsk. un-t, vy*p. 222, 1963, 49-54

TOPIC TAGS: Hamilton-Jacobi method, holonomic conservative system

TRANSLATION: The applicability of the Hamilton-Jacobi method to the holonomic conservative system, when its position is determined by determining coordinates, the number of which exceeds the number of degrees of freedom the system, was determined by G. K. Suslov, who received the appropriate equation in individual derivatives.

In the above work, it is shown that the holonomicity of the mechanical system is a necessary and satisfactory condition for applicability of the Hamilton-Jacobi method to it.

Card 1/2



ACCESSION NR: AR4034719

DATE ACQ: 02Apr64 SUB CODE: AI, MM ENCL: 00

Card 1/2

L 6315-66 EWT(d) IJP(c)
ACC NR: AT5027502 SOURCE CODE: UR/3021/64/000/242/0019/0023

44,55

AUTHOR: Shul'gin, M. F. (Professor)

29
B+1

ORG: Tashkent State University im. V. I. Lenin (Tashkentskiy gosudarstvennyy universitet) 44,55

16,44,55

TITLE: Criteria for integrability of Hamilton-Jacoby equations in excess coordinates

SOURCE: Tashkent. Universitet. Nauchnyye trudy, no. 242, 1964. Voprosy analiticheskoy mekhaniki i podzemnoy gidravliki (Problems in analytical mechanics and underground hydraulics), 19-23

TOPIC TAGS: differential equation, mechanics

ABSTRACT: The author considers the Hamilton Jacoby equations in excess coordinates

$$\dot{q}_\nu = \frac{\partial H}{\partial p_\nu}, \quad \dot{p}_\nu = -E_\nu(H), \qquad (1)$$

$$E_\nu = \frac{\partial}{\partial q_\nu} + \sum_\alpha B_{\nu\alpha} \frac{\partial}{\partial q_\alpha} \qquad (2)$$

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2

L 6315-66
ACC NR: AT5027502

$$q_\alpha = \sum_\nu B_{\nu\alpha} q_\nu + B_\alpha, \qquad (3)$$

a more general form than that considered by all the authors listed in the bibliography. Necessary and sufficient conditions for separation of variables are given. The results obtained in the previous papers emerge as special cases of the results obtained here. Orig. art. has: 28 formulas.

SUB CODE: MA, ME/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002

Card 2/2

L 36294-66 EWT(d) IJP(c)

ACC NR: AR6000694 SOURCE CODE: UR/0124/65/000/009/A005/A006

AUTHOR: Shul'gin, M. F.

TITLE: Integrability criteria for the Hamilton-Jacobi equation in excess coordinates

SOURCE: Ref. zh. Mekhanika, Abs. 9A44

REF SOURCE: Nauchn. tr. Tashkentsk. un-t, vyp. 242, 1964, 19-23

TOPIC TAGS: Hamiltonian Jacobi equation, differential equation solution, COORDINATE

ABSTRACT: The Hamilton-Jacobi equation written in excess coordinates

$$\frac{\partial S}{\partial t}+\sum B_\alpha \frac{\partial S}{\partial q_\alpha}+H(t, q_1, \ldots, q_n, p_{m+1}, \ldots, p_n)=0$$

where

$$p_{m+\nu}=\frac{\partial S}{\partial q_{m+\nu}}+\sum_{\alpha=1}^{m} B_{\nu\alpha}\frac{\partial S}{\partial q_\alpha}\ (\nu=1,2,\ldots,n-m)$$

is considered. Under the assumption that

$$B_{\nu\alpha}=\sum_{\nu=1}^{n-m} A_{\nu\alpha}^{m+\nu}(q_{m+\nu}),\ \beta_\alpha=\beta_\alpha(t)$$

the conditions for which the total integral of the equation has the form

$$S=\sum_{i=1}^{n} S_i(q_i, a_{m+1}, \ldots, a_n)+$$

$$+S_{n+1}(t, a_{m+1}, \ldots, a_n)+a_{n+1}$$

are investigated. V. I. Kirgatov [Translation of abstract]

Card 1/1 SUB CODE: 20, 12

SHUL'GIN, M.T.

Prudovoe rybovodstvo v kolkhoze [Raising fish in ponds on the collective farm].
Chkalov, Obl. gos. izd-vo, 1952. 48 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 2, May 1953

LOSAVIO, G., inzh.; SEMENOV, N., inzh.; SHUL'GIN, N., inzh.

Investigating the methods for electric and steam heating of engines before starting. Avt.transp. 36 no.8:20-22 Ag '58. (MIRA 11:9)

(Automobiles--Cold weather operation)

SHUL'GIN, N.

Conference on forging in split dies. Kuz.-shtam. proizv. 7 no.8: (MIRA 18:9)
Ag '65.

NIKOLENKO, Yu.N.; SHUL'GIN, N.I.

Coordination conference on the mechanization of smith forging. Kuz.-shtam.proizv. 7 no.2:46 F '65. (MIRA 18:4)

SHUL'GIN, N.V.

AID P - 1512

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 8/36

Authors : Slednev, S. M., Eng., and Shul'gin, N. V., Eng.

Title : Fault location in the excitation windings of synchronous machines

Periodical : Elek. sta., 3, 26-29, Mr 1955

Abstract : The authors describe a few simple methods of detecting a coil short and finding its location. One of these consists in fixing a magnetic clamp, another in applying a controlling coil. 6 drawings and diagrams

Institution: None

Submitted : No date

GORUSHKIN, V.I.; SHUL'GIN, [illegible]

Individual consideration of the saturation of the rotor and stator of a synchronous machine. Elektroenergetika no.7:72-83 '63. (MIRA 16:9)

SAUL'GIN, N.V.

Effect of steel saturation in the transverse axis of a salient-pole synchronous generator on some of its operating modes. Elektroenergetika no.7:84-90 '63. (MIRA 16:9)

MALYAVIN, A.G.; Prinimali uchastiye: ROMIN, A.V.; SAVICH, B.M.; STEL'MAKH, A.A.; SHUL'GIN, O.N.; YAKOVLEV, A.S.

Therapeutic effectiveness of furazolidon F-60. Zhur. mikrobiol. epid. i immun. 31 no.7:48-52 Jl '60. (MIRA 13:9)

1. Iz Gosudarstvennogo nauchno-kontrol'nogo instituta veterinarnykh preparatov Ministerstva sel'skogo khozyaystva SSSR.
(FURAZOLIDONE) (FURANS)

SHUL'GIN, P. I.

Shul'gin, P. I. --"Lagging of Electromagnetic Systems of the Time service of the Tashkent Astronomical Observatory." Cand Phys-Math Sci, Inst of Mathematics and Mechanics, Acad Sci Uzbek SSR, Tashkent 1953. (Referativnyy Zhurnal-Astronomiya, Jan 54)

SO: SUM 168, 22 July 1954

1. P. S. SHUL'GIN

2. USSR (600)

4. Cattle Breeding

7. Optimal periods for breeding heifers and cows of the Yaroslavi breed. Dost. sel'khoz. no. 12. 1952.

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

L 22980-66

ACC NR: AP6008554 SOURCE CODE: UR/0166/66/000/001/0088/0089

AUTHOR: Shul'gin, P.I.; Kallistov, A.P.; Tonkikh, V.K.; Shcheglov, N.V.

ORG: Physics Technical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR)

TITLE: A photoelectric semiconductor water turbidity analyzer

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1966, 88-89

TOPIC TAGS: semiconductor device, turbidimeter, photoelectric effect, measuring instrument

ABSTRACT: This article describes a field photoelectric device by means of which it is possible to determine the turbidity of water in 1.5—2 min with an accuracy of at least 2—3%. The device was patented under Registration Certificate No. 36269, April 22, 1963. Silicon photocells manufactured in FTI AN UzSSR (Knigin, P.I., Dubrovskiy, L.A. "Izv. AN UzSSR," seriya fiz.-mat. nauk, 1962, no. 3) were used as sensors. The device also incorporates P-13 semiconductor triodes, a potentiometer, and resistors. The analyzer was tested in laboratory and field conditions. The laboratory tests showed that the calibrated curves fully represent the turbidity of the water. The field experiments were conducted at the hydrostations of Ak-Dzhar, Kyzyl-Kishlak (Syrdar'ya River), and

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ACC NR: AP6008554

the Kayrakkum water reservoir at various degrees of water depth, water turbidity, and velocity. The samples were processed at the Laboratory of Deposits of the Central Asiatic Expedition, State Hydrologic Institute (laboratoriya nanosov Sredneaziatskoy ekspeditsii Gosudarstvennogo gidrologicheskogo instituta). The readings of the device and its accuracy are at least of an order higher than the corresponding data obtained by means of existing methods of analysis of the turbidity of water. Orig. art. has: 2 figures.

SUB CODE: 14 / SUBM DATE: 10Apr64 / ORIG REF: 005

Card 2/2 JC

SHUL'GIN, S.V.

6(5) PHASE I BOOK EXPLOITATION SOV/1930

Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zvukozapisi

Trudy...Vyp. 2. (Transactions of the All-Union Sound-recording Scientific Institute) Nr 2. Moscow, 1957. 164 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: L.P. Apollonova, V.S. Vaymboym, D.P. Vasilevskiy, A.A. Vroblevskiy, S.A. Gribkova, L.O. Grigorash, B.Ya. Kaznachey, V.I. Parkhomenko, L.A. Pusset, Ye.I. Regirer, M.A. Rozenblat; Tech. Ed.: S.A. Gribkova.

PURPOSE: This collection of articles may be useful to scientists, engineers, specialists, and technicians dealing with sound-recording techniques.

COVERAGE: The articles are the results of research carried out at VNAIZ in 1954-1955. Most of the articles deal with magnetic recording, both for the recording of sound as well as for fixing various physical processes on tape, wire, disc, or drum. References appear separately after each article.

Kotlyarevskaya, L.O. Magnetic Discs 79
In connection with the NDD-54 dictaphone developed by VNAIZ, research and development work was carried out at the Institute on magnetic discs. The author discusses in detail the production of magnetic discs. She thanks Candidate of Technical Sciences P.M. Kozlov and Senior Scientific Worker N.A. Trifonova for their assistance. There are 14 references: 8 English, 3 German, 1 Polish, 1 Indian, and 1 Soviet.

Smirnov, V.S. The NDD-54 Disc-type Dictaphone 87
The article briefly describes the NDD-54 dictaphone (VNAIZ), used for sound recording on magnetic discs. The author lists the basic technical characteristics of this equipment. There are no references.

Smirnov, V.S. A Contact Copying Machine for Mass-copy MKTM-1 Magnetic Tape Recorders 90
This magnetic tape-copying machine was developed by VNAIZ, and after a long period of production it was redesigned and modernized to secure a mass production of high-quality magnetic tape copies. There are no references.

Gol'dberg, G.A., and S.V. Shul'gin. Magnetic Reverberation Chamber 93
The authors explain the basic methods of obtaining the reverberation effect by magnetic tape recording. They list the main characteristics of the reverberator designed and developed by VNAIZ, which is now successfully being employed in many organizations. At present the Institute is developing a new model of a remote controlled magnetic reverberator for lot production. There are 28 references: 12 English, 8 Soviet, 5 German, 2 French, and 1 Hungarian.

Langen, A.M., and M.A. Onatsevich. Investigation of External Electromagnetic Stray Fields Caused by Electric Motors in Sound Recording Equipment 122
The authors discuss special problems of design, selection, and application of electric motors of various types for sound recording equipment. They investigate the methods used for eliminating the effects of a-c electromagnetic stray fields. Materials concerning the effects of d-c electromagnetic stray fields will be published later. There are 4 Soviet references.

SHUL'GIN, S.V.; BELYAKOV, V.M.

Magnetic reverberators and their uses. Trudy VNAIZ no.9:86-102 '61. (MIRA 15:9)
(Electroacoustics) (Magnetic recorders and recording)

SHUL'GIN, V.

USSR/Aeronautics
Aircraft - Tanks, Fuel
Aircraft - Fuel Supply

Aug 1947

"Uneven Expenditure of Fuel from Wing Tanks," V. Shul'gin, 6 pp

"Vestnik Vozdushnogo Flota" No 8 (342)

Many times planes must make emergency landings because of lack of fuel, and upon investigation after landing it is discovered that although fuel was still available, passage of air through the intake tubes of a partially empty tank caused misfires in the engine. The author states mathematical formulae for the correction of this mishap, and also gives some concrete

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examples of how this fault might be corrected by better placing of equalizing and intake pipes. Gives diagram of his recommendations, which consist of equipping plane fuel systems with a piezometer.

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SHUL'GIN, V.

PA 50/49T12

USSR/Aeronautics Apr 49
Aircraft - High-Speed
Icing

"Icing of Planes Traveling at High Speeds," Engr-Maj V. Shul'gin, Cand Tech Sci, 2 pp

"Vest Vozdush Flota" No 4

Discusses action of particles of moisture in the air at time air foil is driven through it; manner in which particles are deposited on air foil, and relation between speed of plane and temperature of retarded air. Shows a high-speed plane will collect more moisture than a slow one, and is

50/49T12

USSR/Aeronautics (Contd) Apr 49

more likely to form channel-type ice formation which is more destructive to aerodynamic characteristics of wing and therefore more dangerous.

50/49T12

SHUL'GIN, V.

Cathode follower in the pickup circuit. Radio no.10:32 O '65.
(MIRA 18:12)

VOLKOVA, L.N.; DOROGUTIN, B.S.; SHUL'GIN, V.A.; USTINOVICH, B.P., red.; KUZNETSOV, G.A., red.; EGGERT, A.P., tekhn.red.

[Tapping and turpentining pine] Podsochka i osmolopodsochka sosny. Pod obshchei red. B.P.Ustinovicha. Moskva, Vses.koop. izd-vo, 1959. 182 p. (MIRA 13:8)
(Pine) (Turpentining)

SHUL'GIN, V.A.

Tree tapping with the use of sulfate paste under conditions prevailing in Karelia. Gidroliz i lesokhim. prom. 12 no.5:23 '59.
(MIRA 12:10)

1.Sovet promyslovoy kooperatsii RSFSR.
(Karelia--Tree tapping)

SHUL'GIN, V. A

New methods of tapping the trees. Prom.koop. 13 no.3:10-11 Mr '59. (MIRA 12:4)

1. Starshiy inzhener TSentral'noy nauchno-eksperimental'noy lesokhimicheskoy laboratorii Rospromsoveta.
(Tree tapping)

DANILOV, I.I.; SHUL'GIN, V.A.; PODOFRIGORINA, [illegible]

Tapping of pine plantations of the fourth and fifth class in northern regions. Gidroliz. i lesokhim. prom. 18 no.3:22-23 '65. (MIRA 18:5)

1. KomigiproNIIlesprom.

SOV/137-58-8-16687

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 65 (USSR)

AUTHOR: Shul'gin, V.G.

TITLE: Employment of a Caustic Anolyte for Nickel "Dissolution Baths" (Primeneniye shchelochnogo anolita dlya nikelevykh "vann rastvoreniya")

PERIODICAL: Tr Leningr. tekhnol in-ta im. Lensoveta, 1957, Nr 43, pp 34-37

ABSTRACT: A new type of dissolution bath to supplement the Ni electrolyte in the electrowinning of Ni is suggested. It is proposed that dissolution at the anode be performed in the anolyte without addition of H_2SO_4. In order to prevent the deposition of Ni on the cathodes, they are covered with diaphragms filled with a solution of caustic. Upon electrolysis, H_2 is liberated at the cathode, and the ions of Ni^{2+} moving from the anodes combine with the OH^- ions to form $Ni(OH)_2$ in the anode space and on the outside of the diaphragm. The dissolution of Ni takes place without consumption of acid, and the $Ni(OH)_2$ formed replaces a corresponding amount of $NiCO_3$ as the electrolyte is cleansed of Fe. The economy attainable per year per 10,000 amps is

Card 1/2

SOV/137-58-8-16687

Employment of a Caustic Anolyte for Nickel "Dissolution Baths"

160 t H_2SO_4 and 160 t Na_2CO_3, which goes to the preparation of $NiCO_3$.

N.P.

1. Nickel carbonate--Preparation 2. Electrolytes--Properties 3. Electrolysis

Card 2/2

BAYKOV, B.K., mladshiy nauchnyy sotrudnik; SHUL'GIN, V.I., tekhnik. Prinimal uchastiye: KUZIN, N.D.

Apparatus for using automatic control in the continuous inoculation of animals. Pred. dop. kontsent. atmosf. zagr. no.7:99-104'63. (MIRA 16:10)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta gigiyeny imeni F.F.Erismana.
(AIR -- POLLUTION) (AUTOMATIC CONTROL)
(INNOCULATION)

ALEKSANDROV, A.M., inzh.; BAZHENOV, V.S., inzh.; BOBROVNIKOV, B.N., inzh.; VAGANOV, M.P., inzh.; GUREVICH, B.M., inzh.; DZHIBELLI, V.S., inzh.; DROBAKH, V.T., inzh.; ISAKOVICH, R.Ya., kand. tekhn. nauk; KAPUSTIN, A.G., inzh.; KONENKOV, K.S., inzh.; MININ, A.A., kand.tekhn.nauk; PEVZNER, V.B., inzh.; PESKIN, G.L., inzh.; PORTER, L.G., inzh.; PRYADILOV, A.N., inzh.; SLUTSKIY, L.B., inzh.; FEDOSOV, I.V., inzh.; FRENKEL', B.A., inzh.; TSIMBLER, Yu.A., inzh.; SHUL'GIN, V.Kh., inzh.; ESKIN, M.G., kand. tekhn. nauk; [redacted], D.I., inzh. [deceased]; SINEL'NIKOV, A.V., kand. tekhn. nauk; SHENDLER, Yu.I., kand. tekhn. nauk, red.; NESMELOV, S.V., inzh., zam. glav. red.; NOVIKOVA, M.M., ved. red.; RASTOVA, G.V., ved. red.; SOLGANIK, G.Ya., ved. red.; VORONOVA, V.V., tekhn. red.

[Automation and apparatus for controlling and regulating production processes in the petroleum and petroleum chemical industries] Avtomatizatsiia, pribory kontrolia i regulirovaniia proizvodstvennykh protsessov v neftianoi i neftekhimicheskoi promyshlennosti. Moskva, Gostoptekhizdat. Book 3. [Control and automation of the processes of well drilling, recovery, transportation, and storage of oil and gas] Kontrol' i avtomatizatsiia protsessov bureniia skvazhin, dobychi, transporta i khraneniia nefti i gaza. 1963. 551 p. (MIRA 16:7)

(Automation)

(Petroleum production--Equipment and supplies)

SHUL'GIN, V. M.

"On the Actinometric Scale," by V. M. Shul'gin, Meteorologiya i Gidrologiya, No 4, Apr 57, pp 51-55

In recent years the attention of geophysicists has been attracted to the upper layers of the atmosphere, and the value of the solar constant each year undergoes a change which is reflected in corrections in the ultraviolet and infrared regions of the spectrum. Some authors give the value 1.98 cal/cm^2 per minute. This so-called astronomical solar constant refers to the upper boundary of the atmosphere. For actinometric calculations in the atmospheric layers near the earth, a practical importance is ascribed to the "meteorological" solar constant, which, according to many authors, is established at 1.80 cal/cm^2 per minute. For a more accurate determination of this value, a more accurate absolute instrument must be developed for measuring the intensity of radiation in the lower layers of the atmosphere. The American "Standard No 5" still leaves much to be desired. It must be expected that Soviet geophysicists will concern themselves with its further development. It would be particularly timely, since the original idea of applying a black body and water jet belongs to the prominent Russian physicist, V. A. Mikhel'son. (U)

Sum. 1391

14-57-7-14547

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 45 (USSR)

AUTHOR: Shul'gin, V. N.

TITLE: Geomorphology of Gornaya Shoriya (Skhema geomorfologii Gornoy Shorii)

PERIODICAL: V sb: Tr. nauch. konferentsii Stalinskogo ped. in-ta. Nr 1, Kemerovsk. kn. izd-vo, 1956, pp 225-231

ABSTRACT: Gornaya Shoriya represents a fairly isometric multistage domed uplift, 350 m high on the periphery and up to 1570 m high at the center. Four leveled concentric surfaces of erosion can be clearly traced at the elevations of 1000 m to 1150 m, 800 m to 950 m, 600 m to 750 m, and 450 m to 550 m. Certain genetic relief types can be distinguished. These are: 1) mountainous tectonic-sculptured; 2) sculptured erosional; 3) structural (stratified). The first type

Card 1/2

SHUL'GIN, V.N., inzh.; ZHIGULENKO, L.N., nauchnyy sotrudnik; IVANOV, V.I., doktor tekhn.nauk

Production of woodpulp by alkaline chlorination. Bum.prom. 34 no.8:2-5 Ag '59. (MIRA 12:12)

1. Gosplan SSSR (for Shul'gin). 2. Institut organicheskoy khimii AN SSSR im Zelinskogo (for Zhigulenko, Ivanov).
(Woodpulp)

SHUL'GIN, V.N.; MUDRIK, V.I.

Woodpulp and paper and paper processing industry of Cuba. Bum. prom. 37 no.3:30-31 Mr '62. (MIRA 15:3)

1. Gosplan SSSR (for Shul'gin). 2. Moskovskiy filial Gosudarstvennogo instituta po proyektirovaniyu predpriyatiy tsellyuloznoy i bumazhnoy promyshlennosti (for Mudrik).
(Cuba--Paper industry)

Shul'gin, V.S.

A quick method of determining the age of several uranium minerals by the total amount of lead. V. S. Shul'gin and S. A. Yukimchuk. *Vestnik Leningr. Univ. Ser. Fiz. Khim. Geol. i Geograf.* No. 1, 67–72(1956).—The polarographic quick method is described as follows: 20–25 mg. of uraninite, 0.1–0.2 mm. in size, is dissolved by boiling in 10 ml. of HCl to which several drops of H_2O_2 is added. The soln. is dild. to twice the vol. with H_2O, a few drops of H_2O_2 added again, and evapd. to dryness until excess of HCl is removed, leaving behind yellow crystals of UO_2Cl_2 and $PbCl_2$. Overheating causes conversion of some U to the quadrivalent state which distorts the polarographic detn. HCl (0.1 *N*) is used as the indifferent electrolyte. This gives the best polarogram whereby the U waves and those of Pb do not interfere with each other. Duplicate analyses are made with 0.5 *M* soln. of ascorbic acid. The controls consist of pure salts of $PbCl_2$ and UO_2Cl_2. The PbO_2 is analyzed for Pb gravimetrically at the same time. The period of dropping the Hg is 2.4–2.8 sec. The temp. is maintained with an accuracy of 1°. For one series of polarograms 5–10 ml. of soln. is used. O causes a sharp peak at the start of the polarogram; the soln. is aired for 20–30 min. with H. To calc. the age of the mineral it is not necessary to know separately the concn. of the U or Pb, but only their ratio. Data are presented on the age by this short method as compared with other methods. The differences are very small. This method is not so accurate when appreciable quantities of Th are present. By this method 3–4 samples can be analyzed in a day.

J. S. Joffe

SHUL'GIN, V.V.

Device for continuous measurement of the specific weight of the cement slurry. Neft.khoz. 38 no.5:24-28 My '60. (MIRA 13:8)
(Oil well drilling fluids)

SHUL'GIN, V.V.

Using a correction hydrometer for measuring the density of clay and cement muds. Burenie no.9:34-35 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

ARETINSKIY, V.A.; MERINOV, I.I.; ORLOV, S.P., inzh., retsenzent [deceased]; SHUL'GIN, Ya.A., inzh., retsenzent: SAVIN, K.D., inzh., retsenzent; ZELEVICH,P.M.,inzh.,red.;BOBROVA,Ye.N., tekhn.red.
[Manual for bridge and tunnel foremen] Spravochnik mostovogo i tonnel'nogo mastera. Moskva, Transzheldorizdat. 1963. 519 p. (MIRA 17:2)

YEVDOKIMOV, I.I.; ALEKSEYEV, V.D.; ASHIKHMIN, A.K.; BAYEV, N.V.; BEGLAR'YAN, P.A.; BYCHKOV, I.A.; VESLOVA, Ye.T.; VYZHEKHOVSKAYA, M.F.; GURETSKIY, S.A.; DEMIDOV, I.M.; YESIPOV, Ye.P.; ZHUKOV, V.D.; ZELINSKIY, M.G.; ZOL'NIKOV, F.T.; ZOLOTOVA, L.I.; KIVIN, A.N.; KOMARNITSKIY, Yu.A.; KONSTANTINOV, A.N.; KUL'CHITSKAYA, A.K.; MAKSIMENKO, I.I.; MELENT'YEV, A.A.; MOROZOV, I.G.; MURZINOV, M.I.; OZEMBLOVSKIY, Ch.S.; OSTRYAKOV, K.I.; PANINA, A.A.; PAVLOVSKIY, V.V.; PERMINOV, A.S.; PERSHIN, B.F.; PRONIN, S.F.; PSHENNYY, A.I.; POKROVSKIY, M.I.; RASPONOMAREV, Ye.A.; SEMIN, I.N.; SKLYAROV, Yu.N.; TIBABSHEV, A.I.; FARBEROV, Ya.D.; FEDOROV, G.P.; SHUL'GIN, Ya.S.; YAKIMOV, I.A.; VERINA, G.P., tekhn.red.

[Labor feats of railway workers; stories about the innovators] Trudovye podvigi zheleznodorozhnikov; rasskazy o novatorakh. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 267 p. (MIRA 12:9)
(Railroads) (Socialist competition)

SHUL'GIN, Ya.S., inzh.

Our experience in landslide and washout control. Put' i put.khoz. 4 no. 5:9-12 My '60. (MIRA 13:11)

1. Zamestitel' nachal'nika sluzhby puti Severo-Kavkazskoy dorogi, Rostov-na-Donu.
(Railroad engineering)

SHUL'GIN, Ya. S., inzh.

We manufacture reinforced concrete elements. Put' i put. khoz. 6 no.8:19-21 '62. (MIRA 15:10)

1. Zamestitel' nachal'nika sluzhby puti, g. Rostov-na-Donu.

(Railroads—Maintenance and repair)
(Reinforced concrete)

SHUL'GIN, Ye.A., inzh.

Mechanized drying of grasses and production of feed briquettes. Zhivotnovodstvo 21 no.5:17-21 My '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.
(Hay)

ABRAMOVA, Ye.A.; BAZHENOV, N.M.; SHUL'GIN, Ye.I.

Nuclear magnetic resonance method of studying viscose fibers. Khim.volok. no.2:33-35 '62. (MIRA 15:4)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR (for Abramova, Bazhenov). 2. Leningradskiy tekhnologicheskiy institut TsBP (for Shul'gin).
(Viscose—Spectra)

ABKANOVA, Ye.A., BAZHENOV, N.M. [deceased], SHIL'GIN, Ye.A.

Using the method of nuclear magnetic resonance in the study of the structure of rayon fibers. Khim. volok. no.4:58-60 '64. (MIRA 18:4)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.