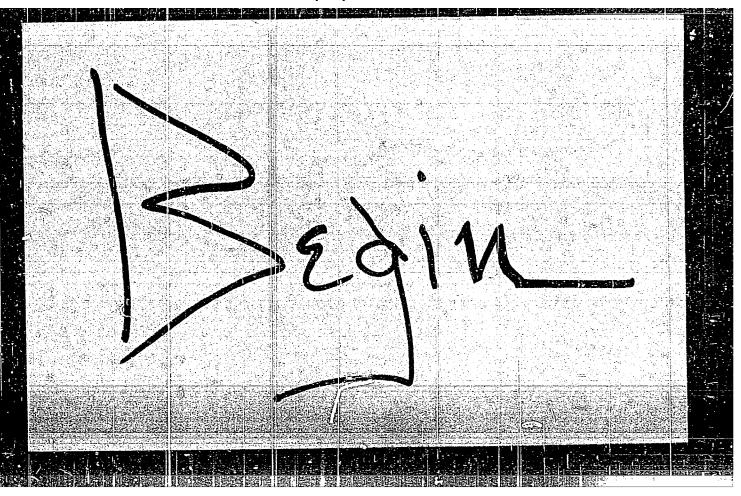
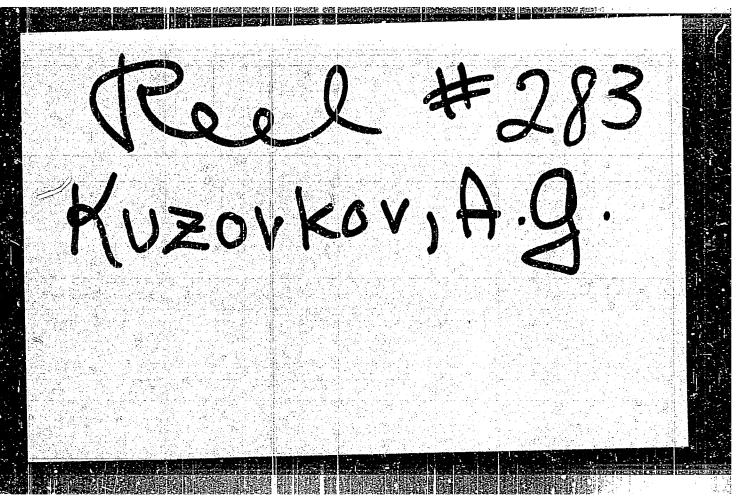
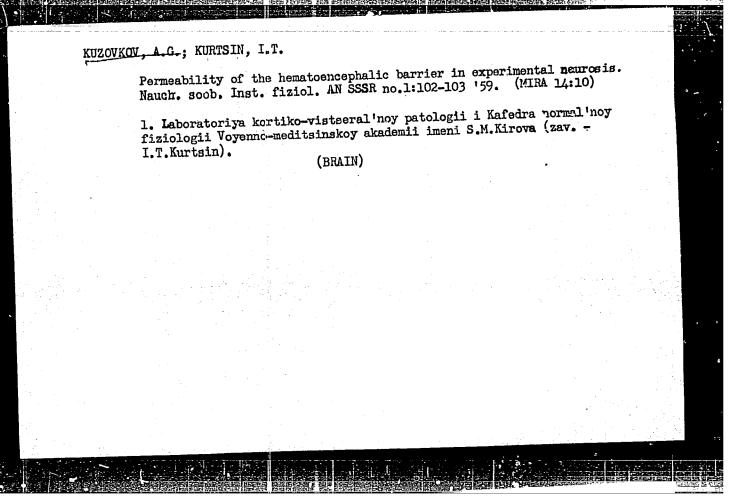
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KUZOVKOY, A.G.

USSR / Human and Animal Physiology (Normal and Pathologi- T cal). Effect of Physical Factors. Ionizing Irradiations.

Abs Jour: Ref Zhur-Biologiya, No 21, 1958 98039

Author : Kuzovkov, A. G.

Inst : Military Medical Academy

Title : Changes of Optical Density of Blood Serum and Superior Nervous Activity in Dogs with Acute Radiation Sickness

Orig Pub: Tr. Voyen.-med. akad., 1957, 74, 35-42

Abstract: In dogs with parotid gland fistula, a dynamic stereotype of positive and inhibitive conditioned reflexes was worked out: in three on acid, in the fourth on alimentary reinforcement. After general irradia-

Card 1/2

112

ACCESSION NR: AT3012861

s/2970/61/000/000/0190/0202

AUTHORS: Kurtsin, I. T.; Kuzovkov, A. G.

TITLE: Permeability of the hemato-encephalic barriers in dogs affected by neurosis and by radiation sickness

SOURCE: Gisto-gematicheskiye bar'yery*: trudy* soveshchaniya, 25-28 maya 1960 g., Moscow, 1961, 190-202

TOPIC TAGS: hemato encephalic barrier, histo hematic barriers, dogs, dogs with conditioned neurosis, dogs with radiation sickness, barrier permeability

ABSTRACT: Permeability of the hemato-encephalic barrier and the state of the higher nervous activity of animals affected with neurosis and the radiation sickness (250 r of x-rays) were studied in parallel experiments on dogs with elaborate exteroceptive salivary conditioned reflexes. The permeability was determined with P³² as

Card 1/3

ACCESSION NR: AT3012861

radioactive tracer. Drastic changes in the conditioned reflex activity, mainly with predominance of the inhibitory process and the presence of the hypnotic phases, were observed in neurotic dogs. In addition to the disorders of cerebral activity, mainly increases in permeability of the hemato-encephalic barrier were noted. In some animals these changes occurred immediately after derangement of the higher nervous activity, and in others within a week time and lasted 1--3 months. The dynamics of permeability changes of the hemato-encephalic barrier shows a correspondence with the course of radiation disease, increasing during the latent period of the disease, decreasing in two or three dogs at the climax, and showing during the recovery period a wave-like restoration to the initial permeability leve. A definite parallelism has been noted between the changes in the higher nervous activity and in the permeability of the hemato-encephalic barrier of the experimental dogs. art. has: 6 figures and 3 tables.

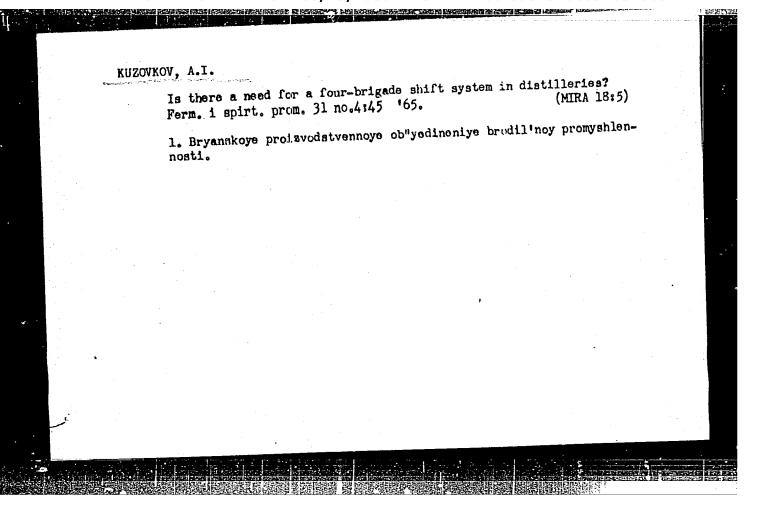
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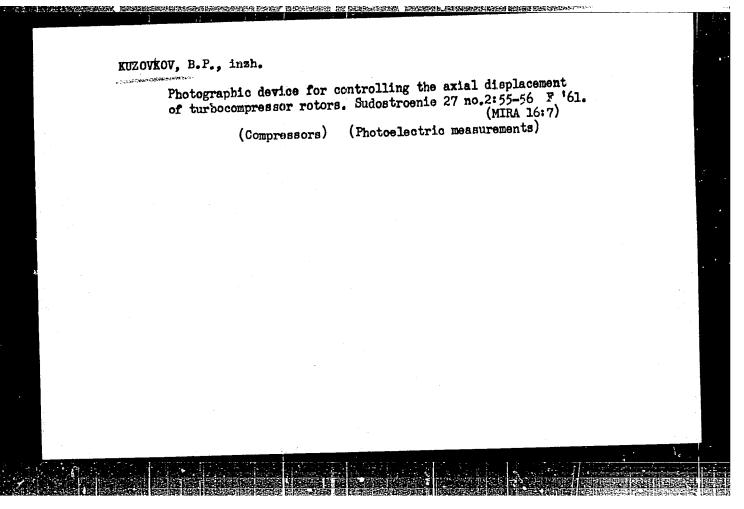
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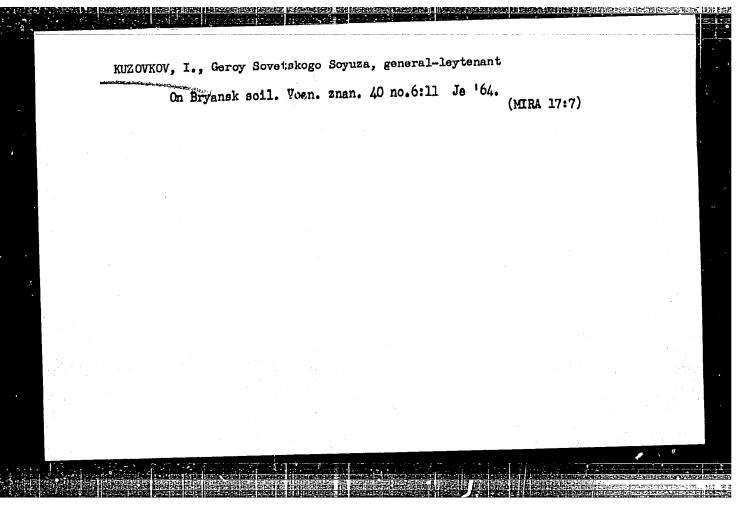
ASSOCIATION: Laboratoriya kortiko-vistseral'noy patologii in-ta fiziologii AN SSSR (Laborat. Cortico-visceral Pathology, Physiology Inst. AN SSSR); Kafedra normal'noy fiziologii Voyenno-meditsinskoy Inst. AN SSSR); Kafedra normal'noy fiziologii Voyenno-meditsinskoy akad. im. S. M. Kirova, Leningrad (Dept. Normal Physiology, Military-Medical Academy)

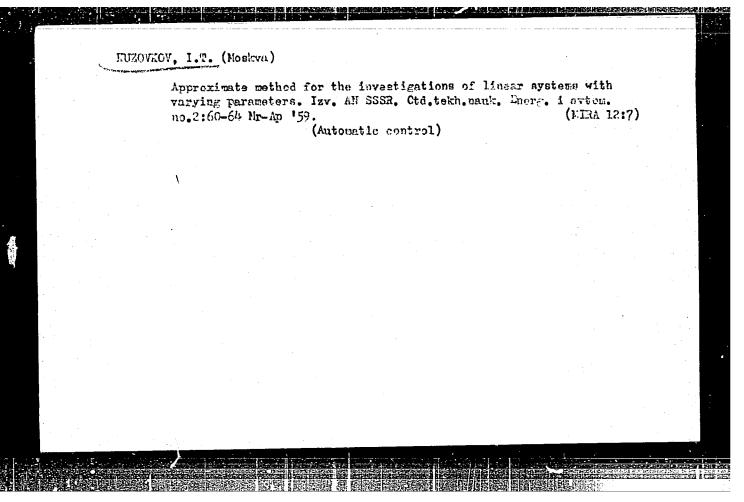
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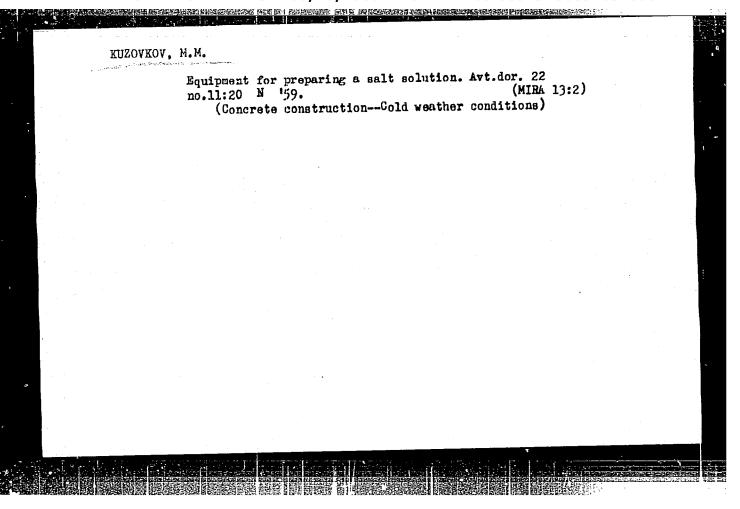
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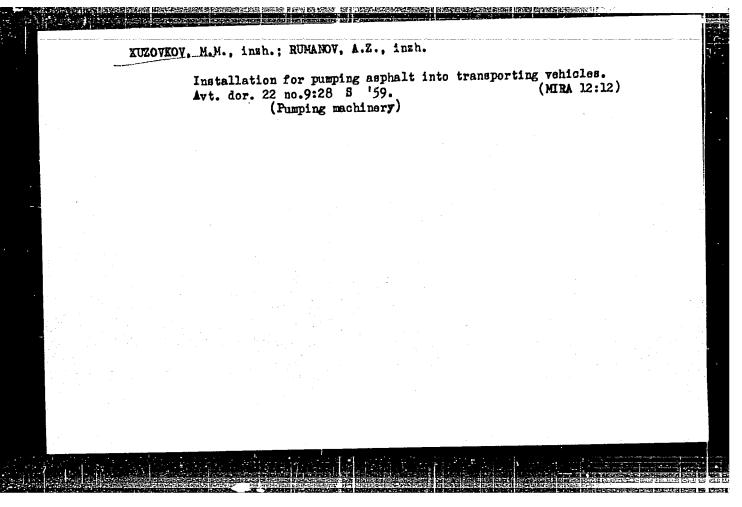
[Progressive practices in road-building organizations] Peredovoi opyt v dorozhnykh organizatsiiakh. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR. No.5. [Building reinforced concrete bridges and manufacturing

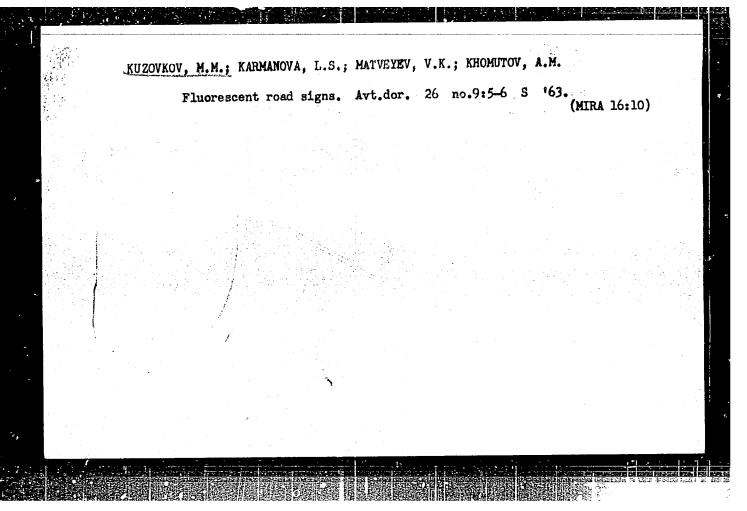
pipes] Opyt stroitel'stva zhelezobetonnykh mostov i trub. 1959.
52 p. (MIRA 12:12)

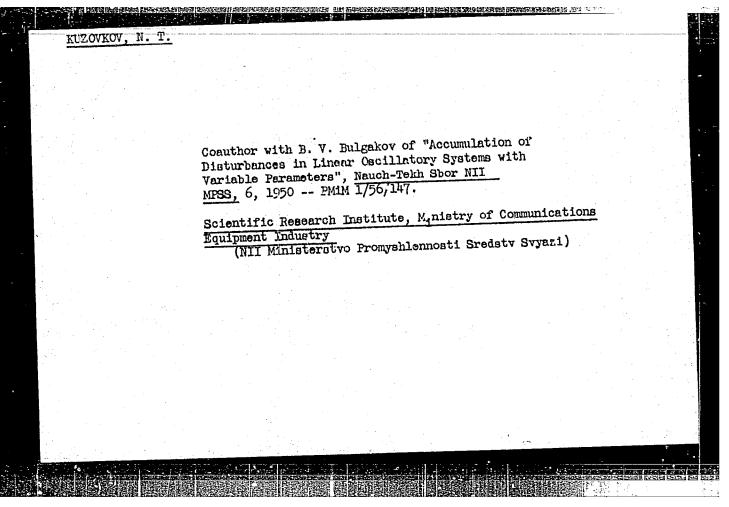
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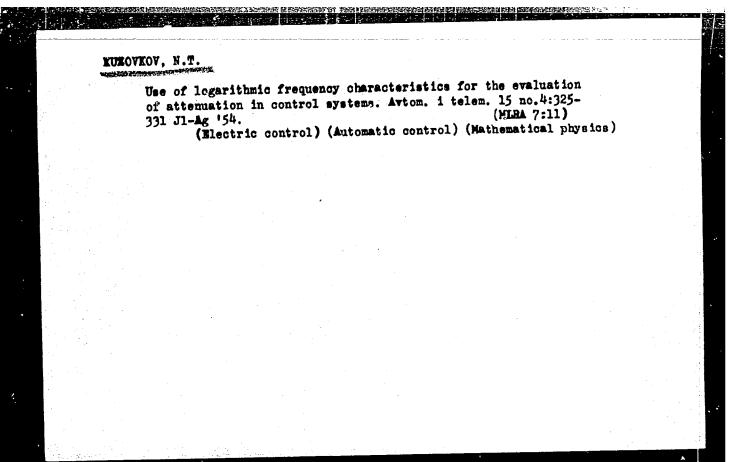








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42	$z = y + \int_{\mathbb{R}^{n}} \hat{x}(i, T) \gamma_{i_1} u \alpha_{i_2} da_{i_3}$	
	whence $\ z\ \leq \ y\ + \int_{0}^{1} \ Y(t)Y^{-1}(t_{1})\ \ w(t_{1})\ dt_{1}$.	Participation of
	where we set $\ y\ = \sum_{i=1}^{n} y_i $, $\ A\ = \sum_{i=1}^{n} a_{ij} $, if y has the components y. A the elements a The difficulty lies in	
は、	amount of numerical calculation, if $F(t)$ is a constant matrix.	
	authors divide the i-range into intervals $\{0, 0, 1, 10, 0, 1, 10, 0, 1, 10, 0, 1, 10, 0, 1, 10, 0, 1, 10, 0, 1, 10, 0, 1, 10, 10$	



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	Kuzorkov N.T. Investigation of	the stability of systems nks by the method of the control of the	G.
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USSR/Electricity - Regulation stability

KUZOVKOV, N.T.

FD-1668

Card 1/1

Pub. 10-4/11

Author

: Kuzovkov, N. T. (Moscow)

Title

: Generalization of the amplitude-phase criterion of stability to systems

with undamped oscillatory circuits

Periodical

: Avtom. i telem., Vol. 16, 43-46, Jan-Feb 1955

Abstract

: The author generalizes the amplitude-phase criterion to systems containing undamped oscillatory circuits, i.e. circuits whose transfer functions possess conjugate complex poles arranged on the imaginary axis. He points cut the possibility of application to the indicated systems of the method of logarithmic frequency characteristics. Three references: James, Nichols, and Phillips, Theory of Servemechanisms (translated into Russian under the title 'Theory of tracking systems'), Foreign Literature Press, 1951. V. V. Solodovnikov, "Method of analysis of the quality of automatic regulation systems," Trudy MVTU imeni Bauman (Works of the Moscow Higher Technical School), Nos 1 and 2, 1949. Ya. Z. Tsypkin, "Supplement to the Book of G. Lauer, S. Lesnik and L. Madson, "Principles of the Theory of Servomechanisms'," State Power Press, 1948.

Institution : -

Submitted

December 12, 1953

KUZOVKOY, N. T

USSR/AATHEMATICS/Applied mathematics CARD 1/1

AUTHOR KUZOVKOV N.T.

SUBJECT

TITLE On an estimation of the accumulation of errors in linear

systems with the aid of logarithmic frequency characteristics.

PERIODICAL Vestnik Moskovsk Univ. 11, 1, 33-39 (1956)

reviewed 6/1957

At the example of the gyroscope stabilizer the author shows how the maximally possible error of the device can be determined if the two moments of disturbance which act around the two gyroscope axes, are bounded with respect to the amount. After having established a structural image the author obtains the transition functions with the aid of logarithmic frequency characteristics. For a suitable transformation of the structural image this often can be made by models or nomograms. From the transition function (= reaction of the system to acunit jump in the entrance) obtained thus, the curve of the maximally possible error can easily be obtained graphically if the moments of disturbance each have its maximal amount and a reversion of the sign is carried out always at the zoros of the transition function. The curves obtained thus, give the maximally possible error of the system as a function of the time; the course of it is monotone.

Chair applied mechanics Moscow Unio.

SUBJECT

USSR/MATHRHATICS/Applied mathematics

CARD 1/1

PG - 153

AUTHOR

KUZOVKOV N.T.

TITLE

The construction of regions of stability and of equal-damping lines by means of the method of logarithmic frequency character-

PERIODICAL

Avtomat. Telemech. 17, 173-179 (1956)

revised 7/1956

the second second second

The stability of the roots of the characteristic equation of a control system P(p) + MQ(p) = 0 shall be investigated for a rational functions P(p) and Q(p)in dependence of a regulating paremeter M. If P and Q are of higher degree, then the method of the D-composition (e.g. Ajsarman, Theory of automatic control of motors, Mossew 1952) becomes very complicated. The author givesa a graphical method which permits to solve such problems quicklier than with the D-composition. Therefore in M = -P(p)/Q(p) the numerator and denominator ere decomposed in a suitable manner such that with modeld and memograms the limits of stability in a complex A-plane can be approximated easily. With this method also the influences of the damping can be considered.

KUZOVKOV, NIKOLAY TIMOFEYEVICH

PHASE I BOOK EXPLOITATION

354

Kuzovkov, Nikolay T'mofeyevich

Teoriya avtomatiche skogo regulirovaniya, osnovannaya na chastotnykh metodakh (Theory of Automatic Control Based on Frequency Methods) Moscow, Oborongiz, 1957. 245 p.

Supplement: Shablony i nomogrammy (Patterns and nomographs) 7,000 copies of each printed.

Reviewer: Dobrogurskiy, S. O., Doctor of Technical Sciences,
Professor; Ed.: Dulin, V. N., Candidate of Technical Sciences;
Ed. of Publishing House: Petrova, I. A.; Technical Ed.:
Rozhin, V. P.; Managing Ed.: Sokolov, A. I., Engineer.

PURPOSE: This monograph is addressed to engineering and technical workers who are concerned with problems of automatic

control. It will also prove of value to students special-

izing in this field.

Card 1/8

Theory of Automatic Control Based on Frequency Methods

354

COVERAGE:

The monograph surveys frequency methods in the analysis and synthesis of follow-up and control systems which can be described by linear differential equations having constant coefficients. The main purpose of the book is to acquaint the reader with the logarithmic frequency characteristics method, and to familarize him with its applications in research on the stability and quality of control, the nature of transient processes, the synthesis of stabilizing links, etc. This method is a further development of A. V. Mikhaylov's contributions to the theory and has been basically elaborated in the last ten years by V. V. Solodovnikov and his colleagues and by non-Soviet scientists. The advantage of the method is that in system analysis, labor-consuming calculations can be replaced by simple graphic representations. The method also considerably lightens the task of follow-up and control-system synthesis. A knowledge of operational calculus (Laplace transform) and the ability to solve differential equations with constant coefficients are required, in order to understand this book. Special attention is devoted to the graphic

Card 2/8

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470

Theory of Automatic Control Based on Frequency Methods representation of calculation methods and nomographs and are given. The author expresses his gratitude to Dobrog	
are given. The author expresses his gratification who reviewed the manuscript of the book and made several observations. There is a bibliography of 33 entries, 24 are Soviet, 4 translations, and 5 in English. TABLE OF	, , , , , , , , , , , , , , , , , , , ,
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KUZOVKOY N.T.

PHASE I BOOK EXPLOITATION 376

- Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, vyp. 1. (Automatic Control and Computing Technique, v. 1) Moscow, Mashgiz, 1958. 302 p. 7,000 copies printed.
- Ed.: Solodovnikov, V.V., Doctor of Technical Sciences, Professor; Scientific Ed. of Publishing House: Polyakov, G.F.; Tech. Ed.: Sokolova, T.F.; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): Pokrovskiy, N.V., Engineer.
- PURPOSE: The book is intended for engineers and scientific personnel.
- COVERAGE: The book is a collection of eleven articles presented at a seminar on the theory and technique of automatic control and computing machines. The seminar was organized by the Scientific and Technical Society of Instrument Making, the Moscow Higher

Card 1/4

Automatic Control and (Cont.) 376

Technical School imeni Bauman, and the Moscow Aviation Institute imeni S.Ordzhonikidze. The Moscow Physics and Engineering Institute also participated in the seminar. The first five articles outline the theory of automatic control, the next four describe automatic control systems and system components, and the last two articles discuss differential analyzers. No personalities are mentioned.

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SOV/112-39-4-7471

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 145 (USSR)

AUTHOR: Kuzovkov, N. T.

TITLE: Some New Applications of the Method of Logarithmic Frequency Characteristics to Investigating Automatic-Control Systems

PERIODICAL: V sb.: Avtomat. upravleniye i vychisl. tekhn. Nr 1. M., Mashgiz, 1958, pp 100-133

ABSTRACT: Use of the method of logarithmic frequency characteristics in solving a number of problems is pointed out. The problems are: (1) evaluation of attenuation; (2) synthesis of the correcting sections that impart to a linear system a predetermined attenuation; (3) constructing a D-partition of equalattenuation lines and a transient phenomenon on the basis of a semilogarithmic real frequency characteristic; (4) some points in evaluating the accumulation of perturbances in constant-parameter linear systems are broached. Twenty-four illustrations. Bibliography: 19 items.

I. Ya.S.

Card 1/1

KUZOVKOV, N.T.

AUTHOR: Kuzovkov, N. T. (Moscow).

24-1-6/26

TITLE: On the motion of a gyro-stabilised platform at large angles of deviation. (O dvizhenii girostabilizirovannoy platformy pri bol'shikh uglakh otkloneniya).

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1958, No.1, pp. 44-51 (USSR).

ABSTRACT: A platform stabilised about two axes by two gyroscope monitored servo power units is considered in this paper under conditions of motion when the angle between the platform and the external frame is no longer small, which was the limitation of earlier theory. The position of the platform axes and of the gyroscope axes is defined by four variables. By setting up the Euler equations for each of the constituent elements of the system, four equations are derived, which the motion of the system obeys. The equations are non-linear. For small deviations, linear equations can be substituted by a variational procedure. These equations can be represented by a circuit configuration diagram which, in turn, can be so transformed that cross-coupling terms are eliminated. In this manner it is shown that the equilibrium angle between the platform Card 1/2nd the external frame has a substantial effect on the

On the motion of a gyro-stabilised platform at large angles of deviation.

nature of the configuration diagram. There are 6 figures and 3 references, all of which are Russian.

SUBMITTED: June 29, 1957.

AVAILABLE: Library of Congress.

Card 2/2

24(6),16(1)

AUTHOR:

Kuzovkov, N.T.

SOV/55-58-6-4/31

TITLE:

An Investigation Method for Control Circuits Containing Linear Terms with Variable Parameters (Metod issledovaniya sistem avtomaticheskogo regulirovaniya, soderzhashchikh lineynyye zven'ya

s peremennymi parametrami)

PERIODICAL:

Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki,

astronomii, fiziki, khimii, 1958, Nr 6, pp 19-30 (USSR)

ABSTRACT:

Let it be possible to decompose a given control circuit into two connected blocks so that all terms of the first block have constant coefficients, while the terms of the second block are linear and have variable parameters. In a simple manner, for the second block which is assumed as one term, the author determines the

"transfer function Ati (p) in the moment ti" for an impulse influence. The function Ati (p) is identical with the transfer function of a term, the coefficients of which are constant and equal to the values of the corresponding variable coefficients. The knowledge of Azi (p) enables to apply to the considered system the usual

linear methods and to answer the

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An Investigation Method for Control Circuits Containing SOV/55-58-6-4/31 Linear Terms With Variable Parameters

following questions: 1) whether the system fades or increases in the moment t_i , 2) how large are the deviations of the single variables in the moment t_i ?, 3) how large is the summed control deviation in the moment t_i ?, 4) how large is the mean quadratic deviation for stochastic influences?. An example is calculated. The author mentions N.M.Krylow, N.N.Bogolyubov, and V.S. Kulebakin. There are 9 figures, and 7 references, 4 of which are Soviet, and 3 English.

ASSOCIATION: Kafedra prikladnoy mekhaniki (Chair of Applied Mechanics) SUBMITTED: August 8, 1958

Card 2/2

SOV/24-58-7-15/36

AUTHOR:

Kuzovkov, N.T. (Moscow)

TITLE:

On the Motion of a Gyrostabilised Platform in a Bicardan Suspension (O dvizhenii girostanilizirovannoy platformy,

ustanovlennoy v hikardanovom podvese)

Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh PERIODICAL:

nauk, 1958, Nr 7, pp 94 - 97 (USSR)

ABSTRACT: A bicardan suspension is an ordinary cardan suspension supplemented by a stirrup in which slides a rod which is firmly linked with the inner ring of the cardan suspension. The general theory of bicardan suspensions has been developed by Ishlinskiy and Chekhovich (Ref 1). In the present paper, on the basis of results of this theory, the equations of small oscillations of a gyrostabilised platform in a bicardan suspension about a position characterised by a large angle of deviation of the outside ring and stirrup are developed. A comparison is also made between these equations and those of the same platform in an ordinary cardan suspension. Comparison of the structural scheme of the platform in the bicardan suspension with that of the platform in the cardan suspension shows that the first system is distinguished from the second by the presence of

Card 1/2

SOV/24-58-7-15/36

On the Motion of a Gyrostabilised Platform in a Bicardan Suspension additional connections and also by higher values for the moments of inertia, the coefficients of viscous friction and the coefficient K_2^2 , defined in Eq (14). The additional connections may have a harmful effect on the stability of the system but a more definite conclusion about the influence of the stirrup structure on the stability of the platform can be made only as a result of analysis based on the use of numerical values for the parameters of the

system. There are 2 figures and 2 Soviet references. SUBMITTED: January 31, 1958

Card 2/2

AUTHOR: Kuzovkov, N. T. (Moscow) SOV/24-58-11-16/42

TITLE: A Single-axis Power Gyro Stabilizer with the Axis of the Frame Set Obliquely (Odnoosnyy silovoy girostabilizator

s kosym raspolozheniyem osi kozhukha)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 11, pp 70-74 (USSR)

ABSTRACT: The system of coordinates etc. are shown in Fig.1; the y-axis (normal to the axis of rotation of the gyro) is set obliquely in the frame. The motion in a system of coordinates connected to the base is examined. The Euler equations for the gyro are Eqs.(1). The base is assumed fixed in the coordinate system; this gives Eqs.(2). Ishlinskiy's methods (Refs.1 and 2) are applied to give Equation (5), in which the torque applied by the stabilizer motor 4 is allowed for (this torque is assumed to follow the law given in Eq.(9), where K is the gain and f a viscous friction coefficient). The equation of slightly perturbed motion (11) is now derived; condition (12) must be fulfilled if the motion is to be asymptotically stable. The relation of restoring torque to displacement is now considered; it is shown that K, f and H cannot be increased

SOV/24-58-11-16/42 A Single-axis Power Gyro Stabilizer with the Axis of the Frame Set Obliquely

without the system becoming unstable for various reasons, but that the oblique position of the y-axis can make an unstable system stable; Eq.(19) shows how K_2 varies as a function of the angle γ of Fig.1; Eq.(18) is of course just the open-loop transfer function. Eq.(16) gives the value of γ which gives L maximal (i.e. the angle γ which is optimal from the point of view of stability, all other parameters remaining fixed). There are 2 figures and 4 references, all of which are Soviet.

SUBMITTED: April 5, 1958

Card 2/2

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KUZOVKOV, N.T.

Method of analyzing automatic control systems containing linear elements with varying parameters. Vest. Mosk.un. Ser.mat., mekh. astron., fiz., khim. 13 no.6:19-30 '58. (MIRA 12:4)

1. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo universiteta.

(Automatic control)

ACHERKAN, N.S., prof., doktor tekhn.nauk; DOROSHKEVICH, A.M., kand.tekhn.nauk; DROZDOVSKAYA, I.S., insh.; KUZOVKOV, N.T., kand.tekhn.nauk; ARTOBOLEVSKIY, I.I., akademik, red.; IOVLEVA, N.A., tekhn.red.

[Automation in the machinery industry abroad; collected translations]
Avtomatizatsiia v mashinostroenii za rubezhom; sbornik perevodov.
Pod obshchei red. I.I.Artobolevskogo. Noskva, Izd-vo inostr.lit-ry.
1959. 321 p.
(MIRA 13:4)

SOV/24-59-2-9/30

AUTHOR: Kuzovkov, N. T. (Moscow)

TITIE: An Approximate Method of Studying Linear Systems with Variable Parameters (Priblizhennyy metod issledovaniya lineynykh sistem s peremennymi parametrami)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 2, pp 60-64 (USSR)

ABSTRACT: The paper deals with an automatic control system that can be considered as consisting of a fixed part and of several parts with variable parameters, which parts are described by simple linear differential equations and are lumped into one. The pulse transfer function is considered; the response to a pulse of arbitrary size and of the form shown in Fig 2 is defined by Eq (1) (if the parameters are fixed) and by Eq (2) (if the parameters are variable). Eq (3) results from using the principle of superposition, as does Eq (4); the two relate to the fixed and variable parts respectively. The subsequent argument is a simple application of stepwise approximation to the functions describing the variable part, whose parameters are considered as constant during any one time interval. The article concludes by pointing out that any calculation based on these methods must include as an Card 1/2 essential part the usual operations of calculating the

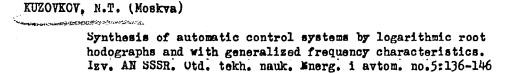
SOV/24-59-2-9/30

An Approximate Method of Studying Linear Systems with Variable Parameters

deviations produced by perturbations, the damping of shock-excited oscillations, and so on. The simplicity of the method presented in the paper is stressed. There are 4 figures and 5 references, of which 4 are Soviet and 1 is English.

SUBMITTED: October 14, 1958.

Card 2/2



S-0 159.

(Automatic control)

(MIRA 13:1)

\$/024/59/000/06/015/028 E023/E235

Belyaeva, G. M., and Kuzovkov, N. T. (Moscow)

TITLE: Transients in a Linear System Having a Pure Delay

PERIODICAL:

: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959,

Nr 6, pp 127-133 (UŚSR)

ABSTRACT: Kasters and Moore's method of logarithmic frequency

characteristics is used to find the roots of the transcendental equation describing the system; the paper is an extension of the one by N. T. Kuzovkov (Nr 5, 1959). Some examples of transients are given to illustrate the

method. There are 7 figures and 6 Soviet references.

SUBMITTED: July 23, 1959

Card 1/1

PHASE I BOOK EXPLOITATION

sov/5258

Kuzovkov, Nikolay Timofeyevich

- Teoriya avtomaticheskogo regulirovaniya, osnovannaya na chastotnykh metodakh (Theory of Automatic Control Based on Frequency Methods) 2d ed., enl. and rev. Moscow, Oborongiz, 1960. 1445 p. Errata slip inserted. 11,000 copies printed.
- Reviewer: S.O. Dobrogurskiy, Doctor of Technical Sciences, Professor, Ed.: M.N. Generozov, Engineer; Ed. of Publishing House: A.G. Belevtseva, Tech. Ed. N.A. Pukhlikova, Managing Ed.: S.D. Krasil'nikov, Engineer.
- PURPOSE: This book is intended for engineers and technicians concerned with the design of servo-and automatic control systems and for students specializing in the field.
- COVERAGE: The book discusses modern methods of frequency analysis (as established by V.V. Solodovnikov) applied to servo-and control systems which can be described by linear differential equations with constant and variable coefficients. Methods of systems synthesis based on generalized frequency characteristics and logarithmic root hodographs are given. Applications of the theories discussed to actual calculations are shown. In connection with this, the book

Theory of Automatic Control (Cont.)

sov/5258

includes reference material, e.g., Hurwitz' stability condition, the solution of algebraic equations, etc. Much attention is given to methods of setting up differential equations for automatic control systems (Ch. I). The second edition presents a fuller treatment of the frequency methods of analysis than the first edition, discussing the classical results of B.V. Bulgakov, A.Yu. Ishlinskiy, V.S. Kulebakin, and B.N. Petrov in the field of control from the point of view of frequency analysis. The new material is contained chiefly in Chapters VIII and IX (generalized frequency analysis) and X (engineering methods for investigation of linear systems with variable parameters). Section 3 of Ch. VIII treats the construction of root hodographs according to frequency methods. As in the first edition, the mathematical apparatus used is simple (differential equations with constant coefficients and Laplace transformation). Only in sections 3 and 4 of Ch. VII which treat the determination of transfer functions from experimental transient processes are the basic principles of matrix calculus used. The author thanks Professor S.O. Dobrogurskiy, Engineers V.I. Blinkov and M.N. Generozov, and Candidate of Physical and Mathematical Sciences I.T. Borisenok. There are 101 references: 82 Soviet (3 of which are translations from the English), 18 English, and 1 German.

Card 2/11

\$/024/60/000/01/024/028 E081/E335

AUTHOR:

(Moscow) Kuzovkov,

TITLE:

Transfer Function of a First-order Link with Linearly

Varying Coefficients

Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh PERIODICAL:

nauk, Energetika i avtomatika, 1960, Nr 1, pp 163-164 (USSR)

ABSTRACT: A method given previously by the author in issue Nr 2 of the journal, 1959, for finding the transfer function approximately by means of power-law approximations to the coefficients is improved by using the inverse pulse transfer function to find those coefficients without resort to those approximations. The argument relates to a link whose equation is Eq (1) (x is input, output and the other quantities are constants). Eq (2) is Eq (1) in general form, with (3) as definitions. The initial conditions are taken as being zero and it is assumed that $k(t) = b_0 + b_1 \tau$. The rest of the results

are quoted from the previous paper (Ref 1) and the

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Transfer Function of a First-order Link With Linearly Varying Coefficients

> treatment from Eq (6) onwards is simply a repetition of the earlier treatment (with less detail). There are 4 references, 1 of which is English and

3 are Soviet.

SUBMITTED: November 3, 1959

Card 2/2

CIA-RDP86-00513R000928310001-7" APPROVED FOR RELEASE: 06/19/2000

BORISENOK, I.T.; GENEROZOV, M.N.; YEREMEYEV, N.V.; KARAMYSHKIN, V.V.; KUZOVKOV, N.T.; BORISENOK, I.T.; KULIKOVSKAYA, N.V.; SAVINOV, G.I., kand.fiz.-mat. nauk, dots. [deceased]; PIROCOV, I.Z.; Prinimali uchastiye: BALAYEVA, I.A.; BALAKIN, B.M.; BELYAYEVA, G.M.; BELYAKOV, V.I.; VELERSHTEYN, R.A.; ZHARKOV, G.M.; KOROLEVA, V.Ye.; LITVIN-SEDOY, M.Z.; POPOV, A.I.; PRIVALOV, V.A.; STUKALOVA, L.M.; CHISTYAKOV, A.I.; SAVVIN, A.B., red.; CHISTYAKOVA, K.S., tekhn. red.

[Laboratory work in theoretical and applied mechanics] Laboratornyi praktikum po obshchei i prikladnoi mekhanike. Moskva, Izd-vo mosk. univ. 1963. 233 p. (MIRA 16:12)

l. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo universiteta (for Balayeva, Balakin, Belyayeva, Belyakov, Velershteyn, Zharkov, Koroleva, Litvin-Sedoy, Popov, Privalov, Stukalova, Chistyakov).

(Mechanics-Laboratory manuals)

WUZOVKOV, N.T. (Moscow)

"Biaxial gyro-stabilized platforms on a moveable base".

report presented at the 2nd All-Union on Theoretical and Applied Mechanics, Moscow, 29 Jan ~ 5 Feb 64.

16-1 19 mg 12 12 mg AFET -, AFADO, AND LAV-EY AND LOOKED AFALL M. AMDC(a)/SSD(t) ACCESSION NR: AP4041971 8/0280/64/000/003/0174/0192 AUTHOR: Kazovkov, N.T. (Hosecu) TITLE: Blaxial, gyro-stabilized platforms on a movable base SOURCE: AN SESR. Izv. Tekhnicheskaya kibernetika, no. 3, 1964, 174-182 TOPIC TAGS: automatic control, gyroscops, gyro'stabilization, blaxial platform, gyro platform ABSTRACT: Gyro-stabilized platforms can be constructed using either two single gyros or a gyro system of two coupled pairs, where coupling is either by means of gears or by an antiparallelogram. Since the four - gyre system is structurally much more complex and costly, it is of interest to compare the merits of the two systems. The comparison is based on range of angular stability and on the magnitude of induced oscillations caused by the motion of the base. The investigations are performed assuming that platform vibrations are small about an equilibrium point which is characterized by zero values of all angular velocities of the system. The equations of motion for a two-gyroscope system are taken from N. T. Kuzevkov (lav. AN SSSR, O W. 1958, No. 1). Using Kuzovkov's method and Ruler's dynamic equations, the equations of metion for a genr-coupled 4 - gyro system are

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derived. Both systems of equations are then linearized by assuming small perturbations in angular crientation of the plate of about the equilibrium point. The computations in greatly simplified because for the conditions assumed in the problem a biggist platform which uses two coupled pairs of gyrolf can be regarded as a simple combination of two monotoxial gyro stabilizers (this is not true of the 2- gyro blazial platform) and, as far an stability is concerned. It platform on amovable base does not differ from a platform on a distinguishing a jupical set of numerical values into the perturbation equations and applying the Ruth stability criterion, it is shown that the stable angular range of both systems is of comparable magnitude and that the four-gyro system does not offer any significant advantages in stability. When motion of the base is considered, then it is shown that the amplitude of the oscillations induced in the platform by this motion is greater for the 2-vvro system than for the 4-gyro system. This is considered to be one of the main advantages of the region system. The above conclusions are made to be one of the main advantages of the region system. The above conclusions are made of the main advantages of the region system. The above conclusions are platform by the purper call example and are not general trig. art. has: 17 equations 210.

ARSOCIATION: none

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PO REP BOV: 008 OTHER: 000

Cord 2/2

ACCESSION NR: AP4043898

\$/0179/64/000/004/0143/0145

AUTHOR: Kuzovkov, N. T. (Moscow)

TITLE: A damped gyroscopic pendulum free of ballistic deviation

SOURCE: AN SSSR. Izvestiya Mekhanika i mashinostroyeniye, no. 4, 1964, 143-145

TOPIC TAGS: gyroscope, gyroscopic pendulum, pendulum, ballistic deviation, gyroscopic pendulum ballistic deviation, damped pendulum

ABSTRACT: A gyroscopic pendulum mounted on an object moving along the Earth deviates from the true vertical by an angle directly proportional to the velocity and acceleration of the moving object. The component directly proportional to velocity is the velocity deviation, while the acceleration component is the ballistic deviation of the gyroscopic pendulum. The latter deviation is equal to zero for any motion of the object along the surface of the Earth when the natural oscillations of the gyroscopic pendulum are not damped and the period is 84.4 minutes (Shuler stipulation). So far, such a gyroscopic pendulum has not been made, and would have only limited use due to the lack of damping of natural oscillations. The present article therefore proves the possibility of such a damped gyroscopic pendulum for the particular case of motion of an object with any

Cord 1/3

ACCESSION NR: AP4043898

desired acceleration. For an object moving at a velocity much lower than the linear velocity of the Earth, the precession motion of the gyroscopic pendulum mounted on this object is described by the following:

by the following:

$$\beta + \left(k + U \sin \varphi + \frac{v_E}{R} \lg \varphi\right) \alpha + \frac{v_N}{R} = k \frac{v_E}{E}, \quad V_E = RU \cos \varphi + v_R$$

$$-\alpha + \left(k + U \sin \varphi + \frac{v_E}{R} \lg \varphi\right) \beta - \frac{v_E}{R} = k \frac{v_N}{g}, \quad k = \frac{Pl}{R}$$
(1)

It is then assumed that a platform is placed on the object, stabilized horizontally and in the North-South direction, and that a gyroscopic pendulum is installed on the platform. The article shows that a damped gyroscopic pendulum may be made when the object moves along a parallel of the Earth and:

$$k(k+U\sin\varphi)=v^{2}$$
 (2)

A platform stabilized in the East-North-zenith directions with an installed damped gyroscopic pendulum may constitute a stabilized double-axis gyroscopic platform corrected in relation to the vertical by the gyroscopic pendulum. The platform will be

Card 2/3

ACCESSION NR: AP4043898

stabilized automatically in relation to the points of the compass if the longitudinal axis of the object is sufficiently well stabilized in relation to the East-West direction. Thus, an object with a platform may move at any acceleration. In this case, the gyroscopic pendulum correcting the stabilized platform with the gyroscope damped northward on the suspension axis will not have ballistic or any other deviations (except for velocity deviations) when the parameters are selected according to M. Shuler. Orig. art. has: 6 equations.

ASSOCIATION: none

SUBMITTED: 26Feb64

ENCL: 00

SUB CODE: NG

NO REF 80V: 002

OTHER: 000

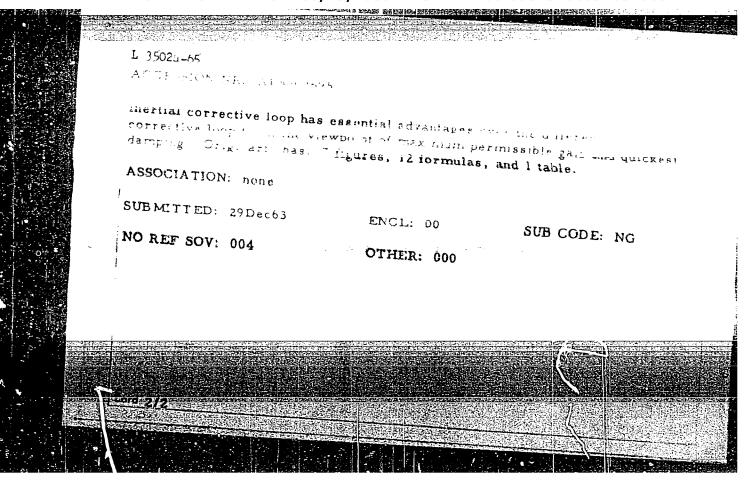
Card 3/3

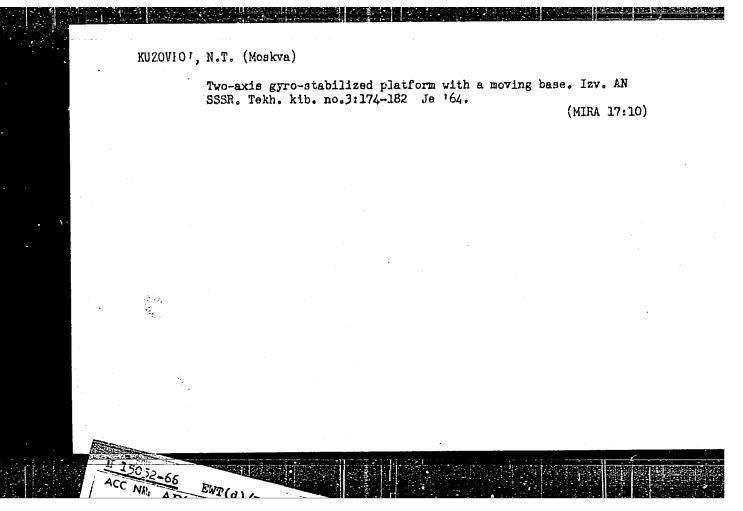
KUZOVKOV, N.T.

(Moskva)

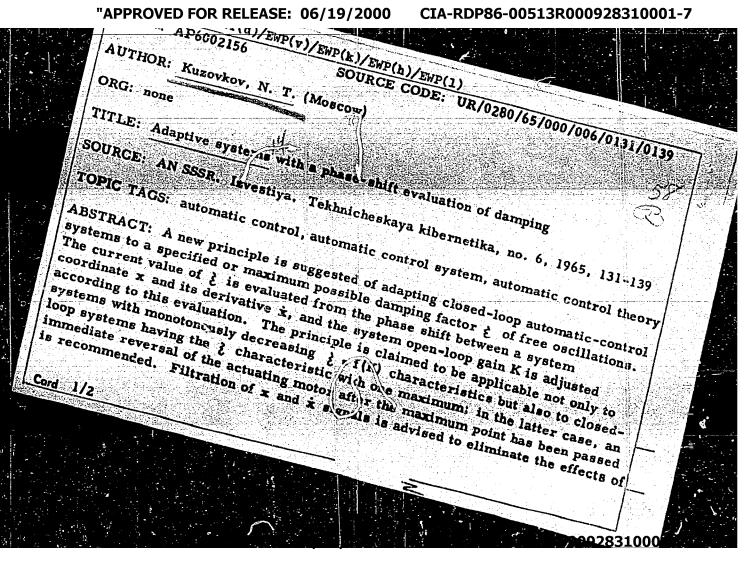
Damped gyroscopic pendulum without ballistic deviations. Izv. AN SSSR Mekh. i machinostr. no.4:143-145 Jl-Ag *64

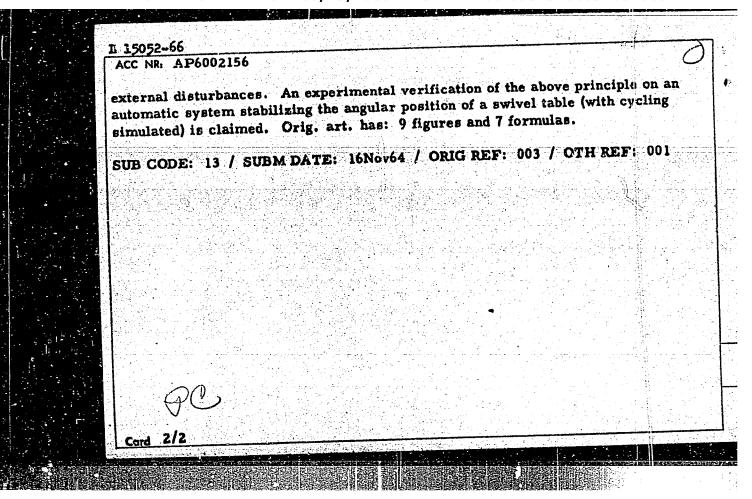
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	ACCESSION NR. AP500 69 88	
		8/0280/64/000/006/0172/0179
0.1	AUTHOR: Kuzovkov, N. T. (M.	oaców)
	TVILLE: Stability of service gy	concopic stabilisers at a high gain
	SOURCE: AN SSSR, Laviblya,	Tekhnicheskaya kibernetika, no. 6, 1964, 172-179
	TOPIC TAGS: gyro stabilizer.	gyro stabilizer stability
	9	and the state of t
	ABSTRACT: Differentiating an	d integrating (equivalent-diagram) corrective loops their respective stability regions and the rate of
	are compared as to the size of	a single-axis servoed gyro stabilizer where the
		of a single-axis stabilizer is analyzed, and
	mothods for ensuring stubilizat	ion are considered. With a high gain, the best
	methods for ensuring stabilizing the system	m is the in-roduction of electric corrective loops,
	they do not impair the static ac	curacy. An original method is given for plotting
	equivalent damping lines and et	uivalent real-root lines. It is found that the
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50V/68-58-2-5,'20

AUTHORS:

Gryaznov, N.S., Fel'dbrin, M.G. and Kuzovkov, B.S.

TITLE:

Coking of Preliminary Pre-heated Coal Blend (Koksovaniye

· 在1950年的19

predvaritel'no nagretoy ugol'noy shikhty)

PERIODICAL:

Koks i Khimiya, 1959, Nr 2, pp 17 - 20 (USSR)

ABSTRACT:

The influence of a preliminary pre-heating of the coal charge on the characteristic features of the coking process and the quality of coke produced was investigated. A blend from Kuznets coals, used on the Chelyabinsk Metallurgical Works, in which a part of the fat coal replaced by gas coal of the following composition was used for the investigation, %: KZh - 41, Zhl - 17, Gl - 11, K2 - 31. The blend was crushed in the usual manner to 93% of - 3 mm fraction. Pre-heating was done in a rotating drum placed in a ring furnace. The coking was done in an electrically heated oven, 400 mm wide of a capacity of 180 kg. The temperature of the surface of oven walls at the end of coking was 1 080 °C and at the tar line plane 950 °C. The hot blend was charged directly from the preheating drum. Changes in the bulk density and rate of flow (from a special bunker with an outlet 40 mm in diameter) of pre-heated blend were determined (Table 1) both attained maximum value at a pre-heating temperature

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CIA-RDP86-00513R000928310001-7" APPROVED FOR RELEASE: 06/19/2000

SOV/68-58-2-5/20 Coking of Preliminary Re-heated Coal Blend

of 200 °C. Pre-heating of the blend to a temperature above 200 °C is unprofitable as the bulk density and the rate of flow decrease due to the beginning of thermal decomposition. Changes in the volatile content, thickness of the plastic layer and apparent viscosity with preheating temperature are given in Table 2 and Figure 1. decrease in the fluidity of the plastic mass begins after pre-heating to 204 °C. The temperature gradient during coking was measured with 4 thermocouples placed in one half of the oven. With increasing pre-heating temperature the mean coking velocity increases but the individual layers of the charge carbonise at a rate sharply different from the mean rate. Changes in the heating rate of ordinary and pre-heated charges during the plasticity period at various distances from the wall are given in Table 3 and changes in the thickness of the plastic layer during its movement towards the tar line plane in Figure 2. The quality of the coke produced from ordinary blend and pre-heated to various temperatures is compared in Table 4. On pre-heating of charge up to 200 °C, the Card2/3 quality of the coke improves, but with pre-heating to a

Coking of Preliminary Pre-heated Coal Blend

SOV/68-58-2-5/20

higher temperature the quality of the coke deteriorates. It is concluded that pre-heating of the coal charge improves the quality of metallurgical coke and increases the throughput of the coke ovens by approximately 35%. Pre-heating of the coal charge within a range up to 200 °C is advantageous. There are 2 figures, 4 tables and 7 Soviet references.

ASSOCIATION:

VUKhIN

Card 3/3

I 16165-65 EWT(1)/EFF(c)/EPA(W)-2 Pab-10/Pz-4 IJP(c) WW

ACCESSION NR: AT4045648

5/2943/64/000/002/0254/0270

AUTHOR: Kuzovkov, V. F.

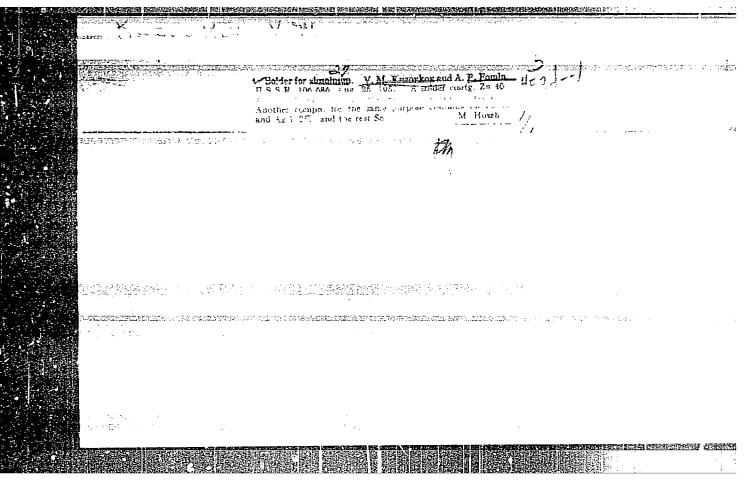
TITLE: Computation of strongly saturated magnetic systems with large air gaps

SOURCE: Seminar po metodam matematicheskogo modelirovaniya i teorii elektricheskikh tsepey. Matematicheskoye modelirovaniye i elektricheskiye tsepi (Mathematical modeling and electrical circuits); trudy* seminara, no 2. Kiev, Izd-yo Naukova dumka, 1984, 254-270

TOPIC TAGS: saturated magnetic system, magnetic air gap, magnetic field computation, magnetic field modeling

ABSTRACT: In the present work, an attempt is made of developing a method of computation of the magnetic field in ferro-magnetic sections of a magnetic conductor of high degree of saturation, having large air gaps. This attempt was prompted by recent developments of energy transformers. E. M. Sivel'nikov and C. V. Tozoni (Trudy* Novocherkasskogo polyt. inst. v. 43/57, 1956) develop-Cord1/2

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electrica of two fie rent in th	nd machines, in which elds: that of a whirl he excitation coils,	e magnetic field in the air th they represent the actua field produced in a homog and of the magnetic field p	l field as a superposition eneous medium by the cu roduced by the molecula
The pres	currents in steel. The first field is found analytically, the second with modeling the present author extends their method to the case of magnetic saturation. Orig. art. has: 5 tables, 25 equations		
Harara Libita Samuli		i An elektrika dila limak elektri karak kandik malak ini kan lebih bilah biri ki	
ASSOCIA	ATION: None		•
	ATION: None TED: 22Feb63	ENCL: 00	
SUBMIT		ENCL: 00 NO REF SOV: 005	OTHEK: 000
SUBMIT	TED: 22Feb63		OTHER: 000



SOV/121-58-10-19/25

AUTHOR:

Kuzovkov. N.M.

TITLE:

Bernel-Shaped Rollers for the Rolling-on of Knurls and the Method of their Manufacture (Bochkoobrazn'yye Roliki dlya Hakatyvaniya Rifleniy I Metod Ckh

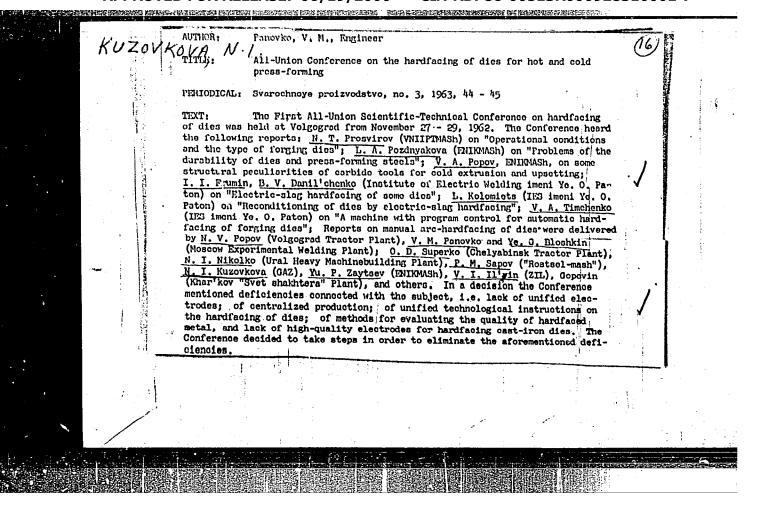
izgotovleniya)

PERIODICAL: Stanki i Instrument, 1958, Nr 10, pp 39-40 (USSR)

ABSTRACT:

Barreled rollers for knurling operations are used at the Izhora Works (Izhorzkiy Zavod) "Imeni Zhdanov ". In making these rollers, after turning the barrels the teeth are milled with a special cutter having internal teeth which is clamped in a three-jaw collet of a lathe. The roller is placed on a special holder clamped on the lathe tool post. Straight or helical teeth can be cut. A wooden lap is also shown for finishing the roller teeth. There are 5 illustrations.

Card 1/1



KUZOVKOVA, O. A., CHEVOTAREV, A. K.

"Experience of improving the sanitary conditions of workers on cattle-breeding sowkhozes unsafe in regard to brucellosis."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

GUSEVA, N.A.; BEZUMNOVA, F.I.; KUZOVKOVA, O.A.; ROMANENKO, V.V.

Outbreak of leptospirosis among residents of the village of Karalat, in Kamyziaksk District of Astrakhan Province. Zhur. mikrobiol. epid. i immun. 32 no.5:119-121 My '61. (MIRA 14:6)

1. Iz Astrakhanskoy oblastnoy sanitarno-epidemiologicheskoy stantsii, (KARALAT (ASTRAKHAN PROVINCE)—LEPTOSPIROSIS)

KUZOVKOVA, Ye.S.

Treatment of tuberculous meningitis without subarachnoid administration of streptomycin. Sov.med. 23 no.11:109-112 N 159.

(MIRA 13:3)

1. Iz tuberkuleznogo otdeleniya Kalushskoy gorodskoy detskoy bol!nitsy.

(TUBERCULOSIS MENINGRAL therapy)

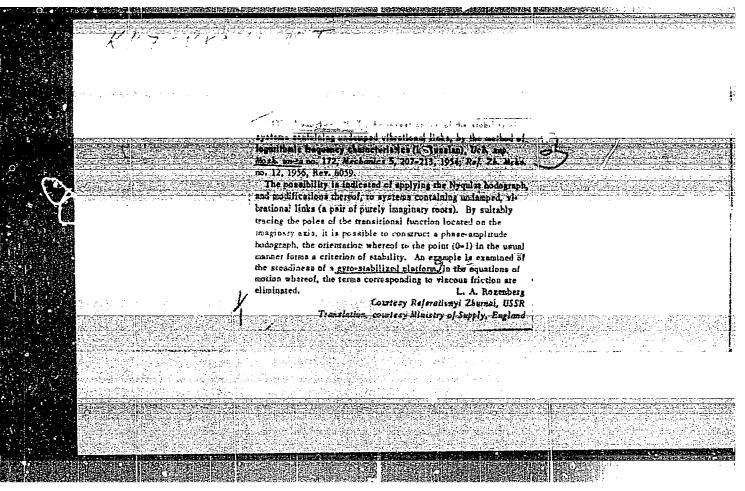
FRENKEL!, I. L., kand. med. nauk; GOTLIB, V. O.; KUZOVKOVA, Ye. S.

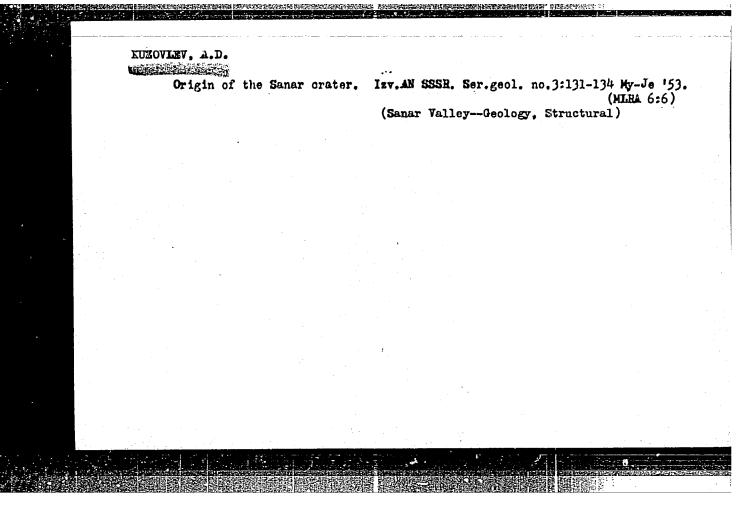
Mass prevention and treatment of rickets with maximum doses of vitamin D in Kaluga Province. Pediatriia no.4:52-54 162.

(MIRA 15:4)

1. Iz Kaluzhskogo obladravotdela (sav. N. G. Afanas'yeva) i Kaluzhskoy detskoy bol'nitsy (glavnyy vrach V. O. Gotlib)

(EALUGA PROVINCE_RICKETS) (VITAMINS_D)





GRIZHENYA, I.F., inzh.; KUZOVLEV, A.I., inzh.; KAZANSKIY, V.V., inzh.; GALKIN, A.S., inzh.

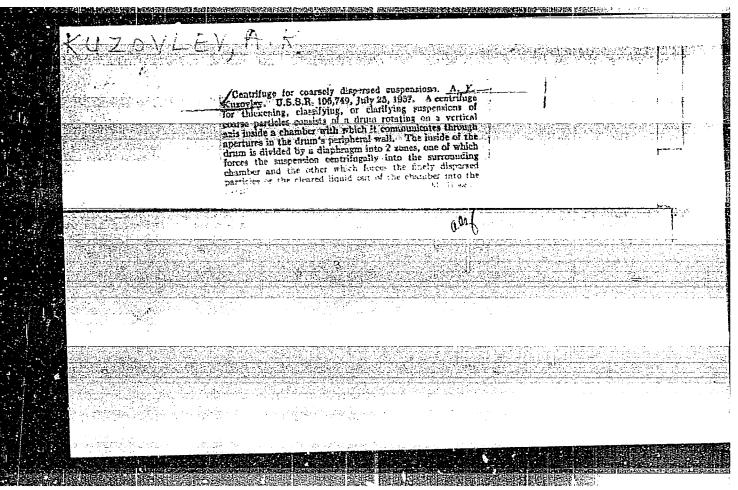
Blast furnace gas purification in the sales of foromanganese. Stal' 22 no.1:89-92 Ja '62. (MIRA 14:12)

1. Kosogorskiy metallurgicheskiy zavod i Yuvenergochermet.
(Ferromanganese--Metallurgy)
(Gases--Purification)

KONDRATOVA, K.G.; KUZOVLEV, A.I.; GUREVICH, E.Ye.; MALEINA, A.P.;
MATROSOVA, N.I.

Rendering cyanide in waste waters harmless with liquid chlorine. Stal' 24 no.10:946 0 '64. (MIRA 17:12)

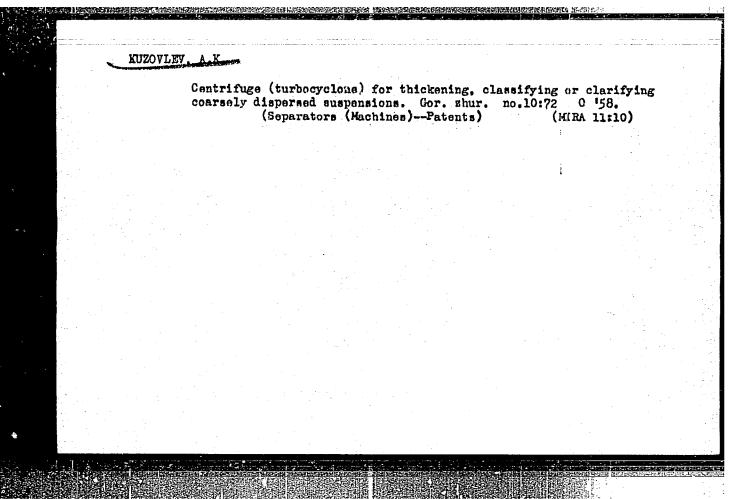
1. Kosogorskiy metallurgicheskiy zavod.



KUZOVLEV, A. K.

Central Asian Geological and Mineral Raw Materials Institute "Tests of a new type of turbocyclone"

report presented at the 4th Scientific and Technical Session of the Mekhanobr Inst, Leningrad, 15-18 July 1958



CIA-RDP86-00513R000928310001-7 "APPROVED FOR RELEASE: 06/19/2000

sov/127-59-4-18/27

AUTHOR:

Kuzovlev, A.K., Engineer

TITLE:

The Centrifugal Classification of Mineral Sus-

pensions in Turbo-Cyclones.

(Tsentrobezhnaya klassifikatsiya mineral'nykh

suspenziy na turbotsiklonakh)

PERIODICAL:

Gornyy zhurnal, 1959, Nr 4, pp 65-68

ABSTRACT:

The author describes different types of hydrocyclones, centryclones and feed-screw centrifuges presently used at home and abroad in concentration plants. He finds that the hydro- and turbocyclones do not give an exact classification of the suspension, as about 20% of the coarse-grained fraction is carried away. The feed-screw centrifuges, guarantying a correct classification, are structurally the feed-screw contributes. turally too complicated and are quickly wornout by mineral suspensions. The new centrifugal classifiers - drum turbocyclones - are of a simple construction and give excellent classi-

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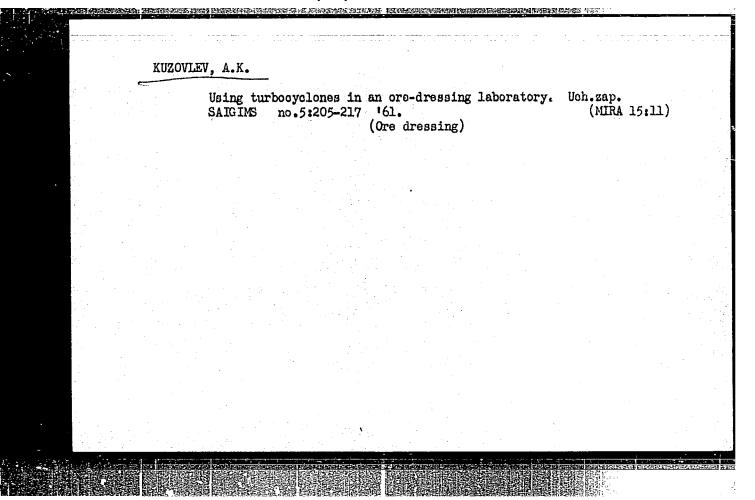
The Centrifugal Classification of Mineral Suspensions in Turbo-Cyclones.

fication results. In this category the author gives a detailed description of the TTs-1D turbocyclone with a bi-zonal turbine, developed by the author (author's certificate Nr 106749; May 27, 1957). The turbocyclone was built at the Ufimskiy zavod gornogo oborudovaniya (the Ufa P'ant of Mining Equipment) and underwent industrial tests by Uralmekhanobr and the Uralzoloto Trust. The results of the tests are described in detail. There are 2 tables, 2 graphs, 1 photo and 1 diagram.

ASSOCIATION:

Sredne-Aziatskiy institut geologii i mineral'nogo syr'ya. (The Central-Asian Institute of Geology and Mineral Raw Material), Tashkent.

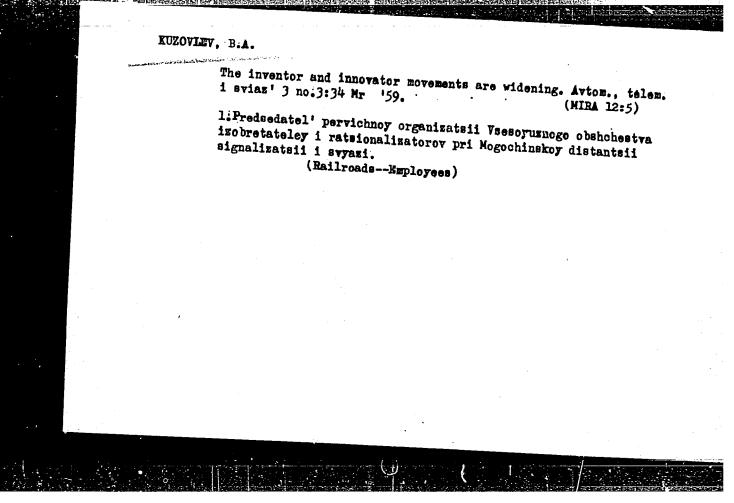
Card 2/2



KUZOVLEV. B.A., starshiy elektromekhanik

Operation schedule for storage batteries: Avtom., telem. i sviaz' 3 no.2:22-24 F '59. (NIRA 12:4)

1. Dom svyazi stantsii Mogocha Amurshoy dorogi. (Storage batteries)



KUZOVLEV, B.A.

We are using electric power efficiently. Avtem., telem.i sviaz 4 no.6:21-23 Je 160. (MIRA 13:7)

1. Starshiy elektromekhanik uzla svyazi stantsii Mogocha Zabaykal'skoy dorogi.
(Railroads) (Electric power)

Connecting an RPU relay through a bridge rectifier. Avtom., telem.
i sviaz' 5 moi3:32 Mr '61. (MIRA 14:9)

1. Mogochinekaya distantsiya signalizatsii i svyazi Zabaykal'skoy dorogi. (Railroads—Communication systems)

Schematic for connecting the negative busbar in TsB x 3 x 2 commutators. Avtom., telem.i sviaz 6 no.4:31 Ap 62. (MIRA 15:4) 1. Mogochinskaya distantsiya signalizatsii i svyazi Zabaykal skoy dorogi.					
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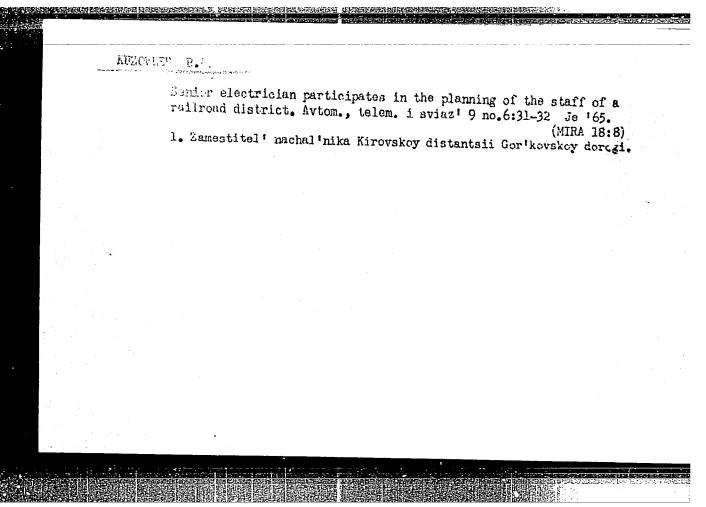
KUZOVLEV, B.A.

Formula to be used. Avtom., telem. i sviaz! 7 no.6:41-42 Je !63. (MIRA 17:3)

1. Starshiy inzh. Mogochinskoy distantsii signalizatsii i svyazi Zabaykal'skoy dorogi.

Electric power supply of communication stations without counter e.m.f. cells. Avtom., telem. i sviaz' 8 no.11:34-35 N '64.

(MIRA 17:12)



- 1. KUZOVLEV, G., Eng.
- 2. USSR (600)
- 4. Hydraulic Engineering
- 7. Stone buffers of particable dimensions to relieve the tension from supporting walls, Mor. flot 13 No. 1,1953

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

KUZOVIEV G W inshener.

Notes on the book "Planning hydraulic structures." Gidr. stroi. 26 no.2:46-47 F '57. (MIRA 10:4)

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AUZUVLEY EM.

AUTHOR:

Kuzovlev, G.H., Engineer

98-58-3-6/22

TITLE:

An Earth Dam on a Weak Muddy Foundation (Zemlyanaya plotina na slabom ilistom osnovanii)

PERIODICAL:

Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 3, pp 23-25(USSR)

ABSTRACT:

The article deals with the construction of an earth dam under water pressure of 7 m, and standing on weak muddy soil. The composition of the soil is evident from figure 1. The width of the muddy stratum mixed with peat goes from 0 at the banks to 4 to 5 m in the middle of the valley. The upper layer is richer in peat than the lower one. Under the mud there is fine and coarse grain sand. The coefficient of porosity, taken by means of 3 bore holes, is shown in the following figures: Nr 1 - 67%, Nr 2 - 113.4% and Nr 3 - 54%. A cross section of the earth dam is shown on figure 2; the lower slant is steeper than the upper slant. The calculated maximum sag of the dam was accepted to be 35% of the width of the peat/mud stratum, or 1.9 m according to the project. The dam was built from dry medium-fine sand which favored the process of sagging and the displacement of water from the bottom. The construction of the dem was carried out by bulldozers and MAZ-205 trucks, without any rollers. Some parts

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