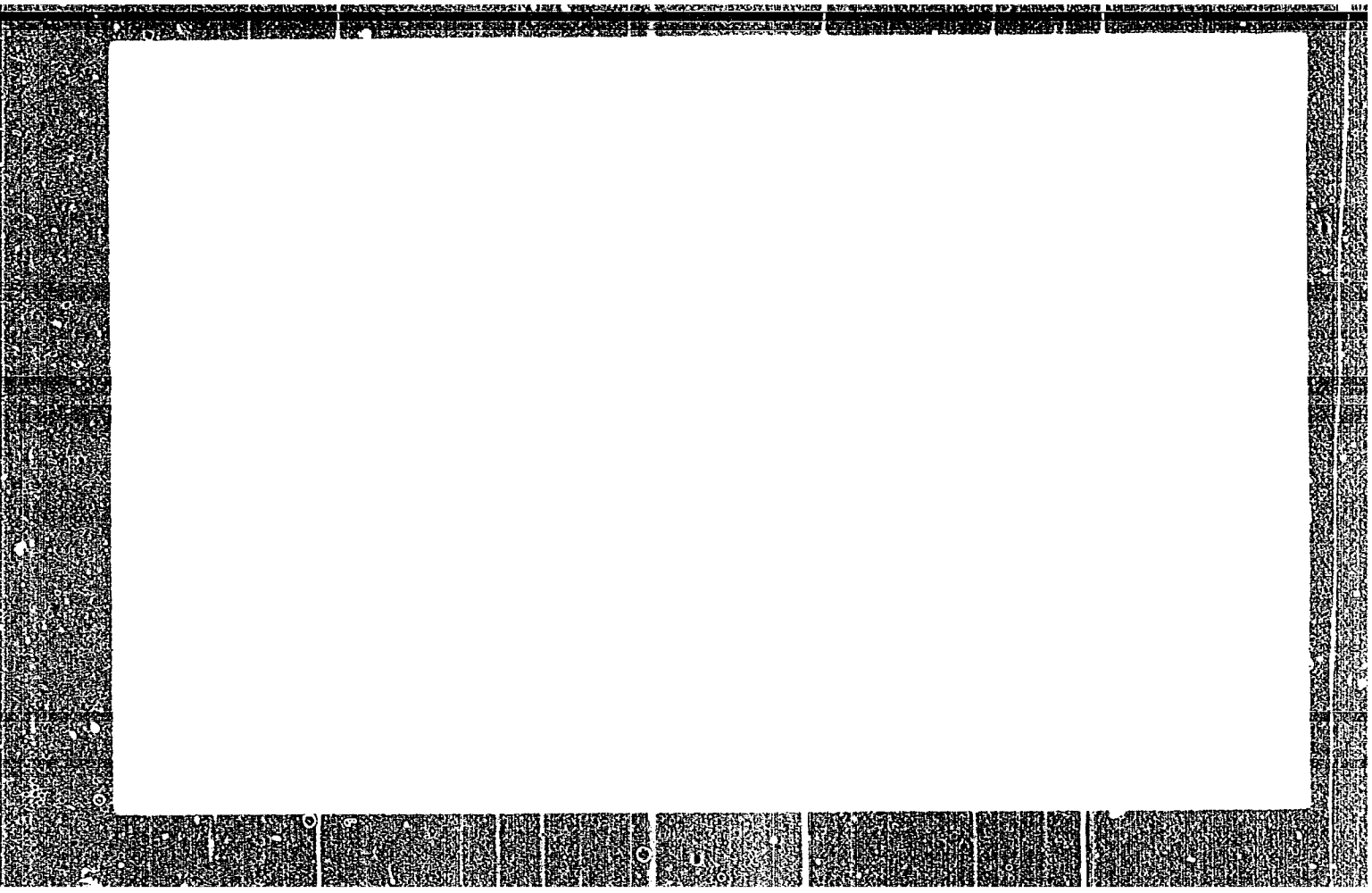
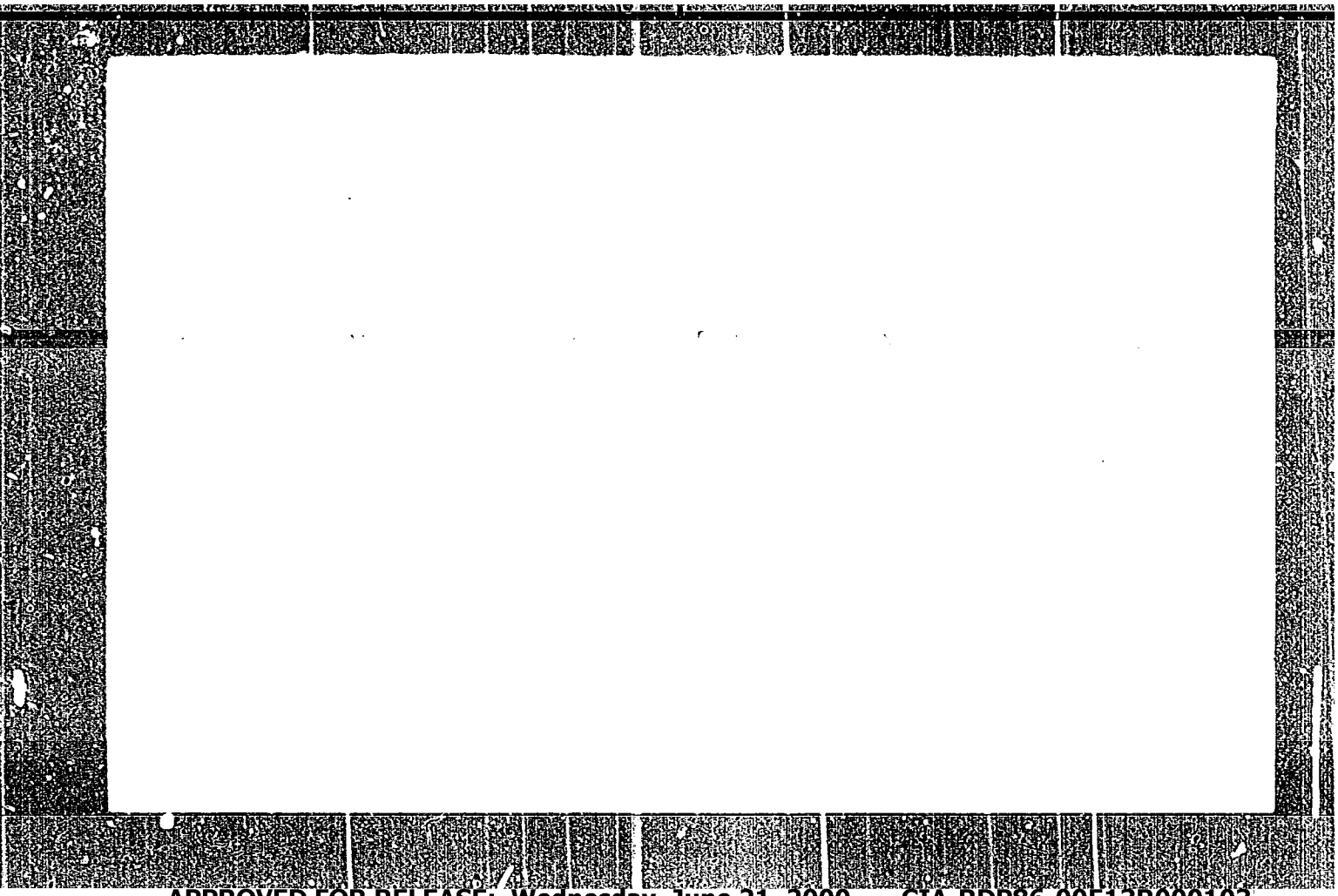
BALAKIREV, V., inzh.

In the name of the earth; radio communication line earth-space--earth. Av.i kosm. 46 no.2:64-70 F '64. (MIRA 17:3)



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R000103

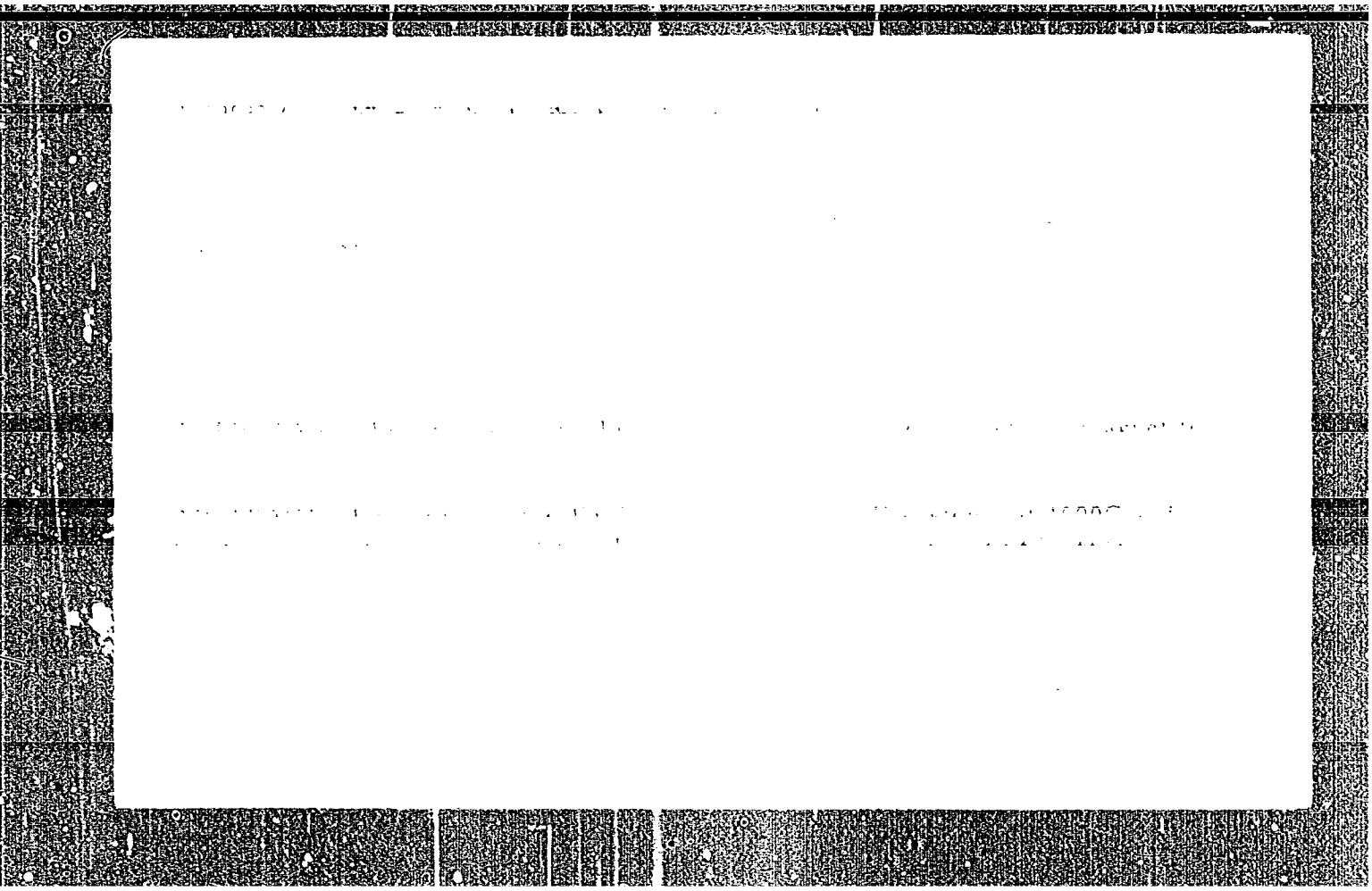


KORNEYEV, Yu.A.; BALAKIREV, V.F.; CHUFAROV, G.I.

Equilibrium conditions and the mechanism of the reduction by hydrogen of solid solutions in the system Mg - Cr - Fe - O. Dokl. AN SSSR 158 no.4:949-952 O '64.

(MIRA 17:11)

1. Institut metallurgii, Sverdlovsk. 2. Chlen-korrespondent AN SSSR (for Chufarov).



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R000103

ACCESSION NR: AT4047946

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: MM,GC

KORNEYEV, Yu.A.; BALAKIREV, V.F.; CHUFAROV, G. .

Phase relations in the spinel region of the system Mg-Al-Fe-C.
Dokl. AN SSSR 159 no.5:1091-1094 D '64 (MIRA 18:1)

1. Institut metallurgii , Sverdlovsk. 2. Chlen-korrespondent AN SSSR (for Chufarov).

TAKENOV, T.D.; BALAKIREV, V.F.; [illegible], G.I.

Phase equilibrium and the mechanism of reduction of solid solutions of manganese ferrite and chromite. Dokl. AN SSSR 160 no.6:1335-1338 F '65. (MIRA 18:2)

1. Institut metallurgii, Sverdlovsk. [illegible] chlen-korrespondent AN SSSR (for Chufarov).

KORNEYEV, Yu.A.; BALAKIREV, V.F.; CHUFAROV, G.I.

Thermodynamic analysis of $MgAl_2O_4$ - Fe_3O_4 solid solution. Dokl. AN SSSR 163 no.4:891-893 Ag '65. (MIRA 18:8)

1. Institut metallurgii, Sverdlovsk. 2. Chlen-korrespondent AN SSSR (for Chufarov).

L 09085-67

ACC NR: AP7002376 SOURCE CODE: UR/0104/66/000/007/0030/0033

AUTHOR: Potashnik, S. I. (Engineer); Kalmykov, I. Z. (Engineer); Stroganov, Ye. M. (Engineer); Kozhevnikov, N. N.; Taizin, N. G. (Engineer); Papanov, A. V. (Engineer); Beschastnov, G. A. (Engineer); Balakirev, V. F. (Engineer)

ORG: none

TITLE: Increasing the power effectiveness of horizontal capsule hydroelectric units

SOURCE: Elektricheskiye stantsii, no. 7, 1966, 30-33

TOPIC TAGS: hydroelectric power plant, electric power production

ABSTRACT: At the Kiev Hydroelectric Station, which was the first low pressure hydroelectric station with horizontal capsule hydroelectric units in the country, the usage of these horizontal units allowed a reduction in cost of construction and installation operations in comparison with vertical units of 20-25%. This article presents an evaluation of the power qualities of the capsule hydroelectric units on the basis of results of usage and investigations performed, as well as some suggestions for increasing these qualities. The author concludes that the horizontal capsule unit can operate normally in the synchronous compensator mode with a power of 15 Mvar without removal of water from the reflex condensation chamber. The thermal state of the rotor windings allows operation with a power coefficient less than unity, which provides for distribution of the reactive power in peak hours and increases the static stability of the capsule hydrogenerators. The usage of capsule generators in the synchronous compensation mode is economically justified. Orig. art. has: 3 figures. [JPRS: 37,564]

SUB CODE: 10 / SUBM DATE: none

UDC: 62.224-131.2

Card 1/1 bp

EWT(m)/EWP(t)/ETI IJP(c) JH/JD

ACC NR: AP6029210 SOURCE CODE: UR/0076/66/040/006/1234/1239

AUTHOR: Kornayev, Yu. A.; Balakirev, V. F.; Chufarov, G. I.

30
13

ORG: Sverdlovsk Metallurgy Institute (Sverdlovskiy institut metallurgii)

TITLE: Reduction of solid solutions of magnesium ferrite and chromite

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 6, 1966, 1234-1239

TOPIC TAGS: magnesium compound, ferrite, chromite, solid solution, CHEMICAL REDUCTION

ABSTRACT: The solid solutions $MgFe_xCr_{2-x}O_4$ were obtained by sintering powdered MgO, Fe_2O_3 and Cr_2O_3 at 1200°C for 15 hr, then soaking at 1000°C for 5 hr and quenching in water. The reduction of $MgFe_{1.75}Cr_{0.25}O_4$ at 900, 1000 and 1100°C and the determination of equilibrium conditions were carried out in a vacuum unit in which an H_2+H_2O mixture circulated. X-ray diffraction was used to study the solid phases formed. It was found that Vegard's additivity law is not obeyed by solid solutions of magnesium ferrite and chromite. In the solid products of reduction of $MgFe_{1.75}Cr_{0.25}O_4$, when up to 33.3% of the latter has been reduced, the phases in equilibrium are a spinel phase of variable composition consisting of magnesium ferrite, magnesium chromite and magnetite, and a wüstite phase formed by ferrous oxide and magnesium oxide; when the reduction has proceeded beyond 33.3%, magnesium chromite, the solid solution MgO-FeO and iron are in equilibrium. The equilibrium pressure of oxygen was determined at

Card 1/2 UDC: 541.11

L 06468-67

ACC NR: AP6029210

various degrees of reduction of $MgFe_{1.75}Cr_{0.25}O_4$. The sequence of conversions involved in this reduction remains the same from 900 to 1100°C. Orig. art. has: 5 figures, 2 tables and 3 formulas.

SUB CODE: 07/ SUBM DATE: 10Jan65/ ORIG REF: 010/ OTH REF: 007

Card 2/2 mfe

BALAKIREV, V.P., inzh.; DODIN, L.G., inzh.

State and development of hydraulic mounted systems abroad. Trakt. sel'khozmash. 33 no.6:46-3 of cover Je '63. (MIRA 16:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy traktornyy institut.
(Tractors—Hydraulic equipment)

BALAKIREV, V.S. (Moskva)

Maximum principle in the theory of second-order optimum systems.
Avtom.i telem. 23 no.8:1014-1022 Ag '62. (MIRA 15:7)
(Automatic control)

ACCESSION NR: AT4021142 S/3078/63/025/000/0181/0199

AUTHOR: Balakirev, V. S.

TITLE: The maximum principle as applied to the optimization of second-order systems

SOURCE: Moscow. Institut khimicheskogo mashinostroyeniya. Trudy*, v. 25, 1963. Kompleksnaya avtomatizatsiya khimicheskikh proizvodstv (Over-all automation in the chemical industry), 181-199

TOPIC TAGS: automation, feedback, optimization, second order system optimization, maximum principle, Pontryagin principle, trajectory, internal delay

ABSTRACT: The "maximum principle" of L. S. Pontryagin is widely used in the solving of optimality problems for various dynamic systems. Bibliographical references are given in the article for those who may not be familiar with the content and proof of this principle. In this paper, the author considers problems arising in the optimization of objects whose motion is described by second-order linear differential equations. The selection of this class of objects was dictated by the following considerations: a) the dynamics of by far the greatest number of industrial facilities (objects) is, in fact, approximately described by linear-differential equations of the second order with "delay" control; b) second-order optimal systems can be investigated with relative ease on a

Card 1/3

ACCESSION NR: AT4021142

phase plane; c) such systems can be synthesized with generally available means (the nonlinearity units of modeling devices, simple functional converters, etc.). The problem considered is based on the following dynamic system in n-dimensional phase space X^n:

$$\dot{x}(t) = A_1 x(t) + B_1 u(t),$$

where x(t) is the vector of X^n;
u(t) is the vector of limited r-dimensional space Ω; and
$A_1 B_1$ are matrix columns.

The author considers the problem of determining the switching lines of dynamic systems with minimization of the transition process time. In his discussion of the realization of the optimal system, the author points out that, once the analytic expression of the switching line has been found, then, in principle, the problem of synthesizing the optimal equation is easily solved; however, from the technical point of view, a number of difficulties are encountered. These difficulties are analyzed and data are given which illustrate the use of computer techniques in this area. Orig. art. has: 4 figures and 55 formulas.

ASSOCIATION: Institut khimicheskogo mashinostroyeniya, Moscow (Institute of Chemical Equipment Design)

Card 2/3

ACCESSION NR: AT4021142

SUBMITTED: 00	DATE ACQ: 19Mar64	ENCL: 00
SUB CODE: IE, MD	NO REF SOV: 011	OTHER: 000

3/3
Card

ACCESSION NR: AT4021144 S/3078/63/025/000/0214/0230

AUTHOR: Balakirev, V. S.

TITLE: Optimizing second-order systems with delay

SOURCE: Moscow. Institut khimicheskogo mashinostroyeniya. Trudy*, v. 25, 1963. Kompleksnaya avtomatizatsiya khimicheskikh proizvodstv (Over-all automation in the chemical industry), 214-230

TOPIC TAGS: automation, feedback, internal delay, optimization, second order system

ABSTRACT: The author considers the problem of optimization when the system of differential equations contains variables with a delay argument. In n-dimensional phase space X^n a dynamic system is considered, as given by the equations:

$$\dot{x}_i(t) = f_i[x(t), y(t), u(t)], \quad i = 1, 2, \ldots, n, \qquad (1)$$

where x(t) and $y(t) = x(t-\tau), \tau > 0$ are the vectors X^n, and u(t) is the vector of r-dimensional closed space $\subset CV^r$ (V^r is Euclidian or Hausdorf space). The optimization of linear systems is considered in the light of these considerations. However, it is well known that the dynamic properties of the majority of industrial objects are described, strictly speaking, by second-order nonlinear differential equations. On the other hand, if the deviations of

Card 1/6

the coordinates of the object from the state of equilibrium are small, the movements of the object can be described with a high degree of accuracy by a second-order differential equation (with a delay element introduced). For this reason, the solution of variation problems in the optimization of objects with transfer functions of the type W(p) =

$$\frac{ke^{-p\tau}}{(T_1p+1)(T_2p+1)}$$

is of great importance from the practical point of view. The dynamics of a second-order system with delay argument is described by:

$$\left.\begin{aligned} &\dot{x}_1(t) = -ax_1(t) + ku(t) \quad x_1(t) = \varphi(t), \\ &-\tau < t < 0, \; x_1(T) = 0, \\ &\dot{x}_2(t) = -bx_2(t) + cx_1(t-\tau), \\ &x_2(0) = x_{20}, \; x_2(T) = 0. \end{aligned}\right\} \quad (3)$$

ACCESSION NR: AT4021144

This system corresponds to an object with the structural diagram shown in Figure 1 of the Enclosure. The problem of optimizing such a system is discussed in detail. Two particular cases are considered: 1) the dynamics of the object are described by the following system of differential equations:

$$\left.\begin{aligned} \dot{x}_1(t) &= ku(t),\ x_1(t) = \varphi(t),\ -\tau < t < 0,\ x_1(T) = 0; \\ \dot{x}_2(t) &= cx_1(t-\tau) - bx_2(t),\ x_2(0) = x_{20};\ x_2(T) = 0 \end{aligned}\right\} \quad (3)$$

and it is necessary to minimize the function $J = \int_0^T dt$; 2) the dynamic properties of the control object are characterized by the following system of equations

$$\left.\begin{aligned} \dot{x}_1(t) &= ku(t),\ x_1(t) = \varphi(t),\ -\tau < t < 0,\ x_1(T) = 0, \\ \dot{x}_2(t) &= cx_1(t-\tau),\ x_2(0) = x_{20},\ x_2(T) = 0. \end{aligned}\right\} \quad (4)$$

Card 3/5

ACCESSION NR: AT4021144

and it is necessary to minimize the function $J_1 = \int_0^T dt$. Orig. art. has: 5 figures and 41 formulas.

ASSOCIATION: Institut khimicheskogo mashinostroyeniya, Moscow (Institute of Chemical Equipment Design)

SUBMITTED: 00 DATE ACQ: 19Mar64 ENCL: 01

SUB CODE: IE, MD NO REF SOV: 003 OTHER: 001

Card 4/5

BALAKIREV, V.S. (Moskva)

Certain method for realizing optimum systems using a digital computer. Avtom. i telem. 24 no.4:521-530 Mr-Ap '63. (MIRA 16:4)
(Automatic control)

ACCESSION NR: AP4042493 S/0103/64/025/007/1086/1095

AUTHOR: Adamchuk, I. M. (Moscow); Balakirev, V. S. (Moscow)

TITLE: Analysis of practical methods of smoothing experimental transient responses

SOURCE: Avtomatika i telemekhanika, v. 25, no. 7, 1964, 1086-1095

TOPIC TAGS: automatic control, automatic control system, transient response

ABSTRACT: This problem is considered: Of the existing practical methods of smoothing experimental transient responses, select a method ensuring a minimum value of:

$$\tilde{M}\int_{\omega_1}^{\omega_2}|W(i\omega)-W^*(i\omega)|^2\,d\omega,$$

where $W^*(i\omega)$ is the amplitude-phase characteristic (APC) obtained from the smoothed transient response h(t), $W(i\omega)$ is the true APC, $\tilde{M}$ is the symbol of

Card 1/2

ACCESSION NR: AP4042493

mathematical expectation, $[\omega_1, \omega_2]$ is the frequency range. A few linear differential equations were solved for a step input on an analog computer; simultaneously, a quantized transient response with an additive noise was recorded. The smoothing of transient functions thusly obtained was performed by these methods: (1) Sliding average; (2) Fourth differences; (3) Fourier series; (4) Cheby*shev polynomials. The method of smoothing by fourth differences, although somewhat less accurate than the other methods, has the important advantages of simplicity of computation and minimum limitations and, therefore, is recommended for solving engineering problems of industrial automatic control. Orig. art. has: 4 figures, 9 formulas, and 4 tables.

ASSOCIATION: none

SUBMITTED: 01Mar63 ENCL: 00

SUB CODE: DP, IE NO REF SOV: 007 OTHER: 002

Card 2/2

BALAKIREV, V.S.; DUDNIKOV, Ye.G.; KLOKOV, Yu.L.; MASLENNIKOV, I.M.; TSIRLIN, A.M.

Solving some problems of automatic control by means of the analogue digital computer. Trudy MIKHM 25:3-17 '63.
(MIRA 17:6)

BAL'KIREV, V. .

Maximum principle as applied to the optimization of systems of the second order. Trudy MIKHM 25:181-199 '63.

Optimization of systems of the second order with delayed argument. Ibid.:214-230 (MIRA 17:6)

ADAMCHUK, I.M. (Moskva); BAIKIREV, V.S. (Moskva)

Analysis of engineering methods for smoothing experimental transient functions. Avtom. i telem. 25 no.7:1086-1095 Jl '64.

(MIRA 17:12)

L 23510-66 EWT(k)/EWT(d)/EWP(h)/EWP(v)/EWP(l)

ACC NR: AP6002458 SOURCE CODE: UR/0144/65/000/012/1324/1330

AUTHOR: Balakirev, V. S. (Candidate of technical sciences, Senior research associate, Member of automation of chemical production department); Brio, B. S. (Engineer, Member of automation of chemical production department)

ORG: Moscow Institute of Chemical Machine Building (Moskovskiy institut khimicheskogo mashinostroyeniya)

TITLE: Determination of settings for digital controllers

SOURCE: IVUZ. Elektromekhanika, no. 12, 1965, 1324-1330

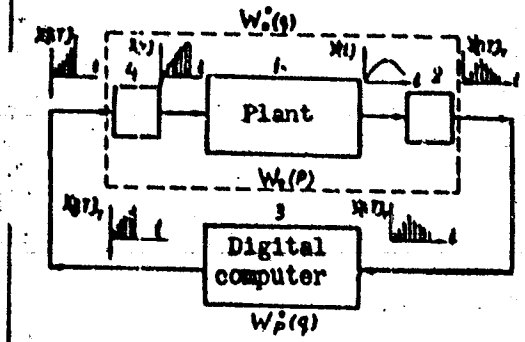
TOPIC TAGS: digital controller, automatic control, automatic control system, automatic control theory

ABSTRACT: The inclusion of a digital computer into a closed-loop automatic control system turns the latter into a pulse-type relay system and renders inapplicable conventional methods of calculating the settings for continuous linear controllers (proportional, integral, or proportional-integral). The dynamic properties of plant 1 (see figure) are described by this transfer function: $W_0(p) = \frac{ke^{-p\tau}}{\sum_{r=1}^{n} T_r^r p^r + 1}$, where k,

Card 1/2 UDC: 681.142.3+62-502

L 23510-66

ACC NR: AP6002458



Automatic system with a control digital computer

2 figures and 26 formulas.

τ, T_μ, $\mu = 1, 2, \ldots,$ and n are known positive numbers; usually, $n \leq 3$. Continuous plant output y(t) is applied to analog-digital converter 2 which level-quantizes the signal. The control response is applied to digital-analog converter 4 (e.g., a pulse-signal shaper). The well-known method of generalized amplitude-phase characteristics (used for determining the settings of continuous linear controllers) is adapted for the above control-computer case, and formulas for setting a proportional-integral controller are developed. A procedure for calculating the settings is indicated. Orig. art. has:

SUB CODE: 09, 13 / SUBM DATE: 18Nov64 / ORIG REF: 007

Card 2/2

ACC NR: AP6036104 SOURCE CODE: UR/0256/66/000/011/0082/0084

AUTHOR: Balakirev, V. S. (Technician; Lieutenant)

ORG: none

TITLE: Automatic device for the FKP-2 camera attachment

SOURCE: Vestnik protivovozdushnoy oborony, no. 11, 1966, 82-84

TOPIC TAGS: photography, tracking photography, automatic photography, time delay photography, camera accessory, radar recording camera/FKP-2 camera ACCESSORY

ABSTRACT: This article states that a device (220 v, 50 hg) for the automatic control of the FKP-2 camera attachment has successfully passed an 8-hour test. This device assures the photographing of a radar station's plan-position indicator at 2-, 4-, and 8-min intervals, the automatic brightening of the clock before making the next exposure, and also the photographing of individual frames at the discretion of the operator. The control panel for the device is installed near the plan-position indicator's screen. Orig. art. has: 1 figure.

SUB CODE: 14/ SUBM DATE: none

Card 1/1 UDC: none

BALAKIREV, V.Ya., inzh.; OKUNEV, V.I., inzh.

D-480 new hitched vibration road-roller. Stroi. i dor. mash. 6 no.6:20-21 Je '61. (MIRA 14:7)
(Road rollers)

14(5) SOV/92-59-2-9/40

AUTHOR: Balakirev, Ya.A., Engineer

TITLE: Treatment of Pressure Wells With Hydrochloric Acid Performed Simultaneously With the Injection of Compressed Air (Solyanokislotnaya obrabotka kompressornykh skvazhin s odnovremennoy podachey szatogo vozdukha)

PERIODICAL: Neftyanik, 1959, Nr 2, p 13 (USSR)

ABSTRACT: According to this article the present method of treating wells with hydrochloric acid is rather unsatisfactory. When the permeability of the perforated formation is low or not uniform, a certain part of acid remains in the annular space of the well stem. If the perforated formation is thick, acid penetrates into that part of the oil reservoir rock which drains easily, or consists of loose formations. This makes the treatment of a well inefficient. Moreover, hydrochloric acid, remaining in pipes of the well, ruins them. Therefore, the author of the present article proposed a new method of treating oil wells of fields exploited by the Ordzhonokidze organization. According to this method, the annular space of the well is filled with compressed air before the hydrochrolic acid solution is introduced into the 2 1/2-in. pressure tubing.

Card 1/2

When the acid solution is pumped into the space beyond the pipe stem, some 10-15 percent compressed air is injected for the aeration of the acid fluid in the productive zone. This aeration facilitates the penetration of acid into the formation. The hydrochloric acid column exercizes a pressure on the air-acid emulsion which penetrates into the formation as the operating agent. Oxygen of the air raises the temperature of the hydrochloric acid of the emulsion, and thus stimulates its chemical reaction. The injected air prevents the acid from remaining in the annular space of the well stem. This kind of treatment produced excellent results in oilfields of the Ordzhonikidzeneft' organization and the daily output of petroleum from each well soared 2-3 times. There is one schematic drawing.

ASSOCIATION: Promysel No 7 upravleniya Ordzhonikidzeneft' (The No. 7 Oilfield of the Ordzhonikidzeneft' Organization)

ACC NR: AN7[illegible]5515 SOURCE CODE: UR/9026/67/000/040/0004/0004

AUTHOR: Balakirev, Ye. (Engineer, Meteorologist)

ORG: none

TITLE: Weather studies

SOURCE: Turkmenskaya iskra, no. 40, 16 Feb 67, p. 4, cols. 6-7

TOPIC TAGS: meteorology, weather forecasting

ABSTRACT: The article describes work done at the Ashkhabad Weather Bureau. This year, 25 hydrometeorological stations in Turkmenistan will be supplied with modern equipment. In future years, zonal hydrometeorological observatories will be created, and at many points, unified automatic radio-meteorological stations will be installed. [NC]

SUB CODE: 04 SUBM DATE: none/ ATD PRESS: 5115

Card 1/1 UDC: none

BALAKIREV, Ye.K.

Glaze and rime phenomena in Turkmenia. Sbor. rab. Ash. gidromet. obser. no.3:43-53 '62. (MIRA 17:1)

BALAKIREV, Ye.K.

Rare year in Turkmenia. Priroda 53 no.9:127-128 '64.
(MIRA 17:10)

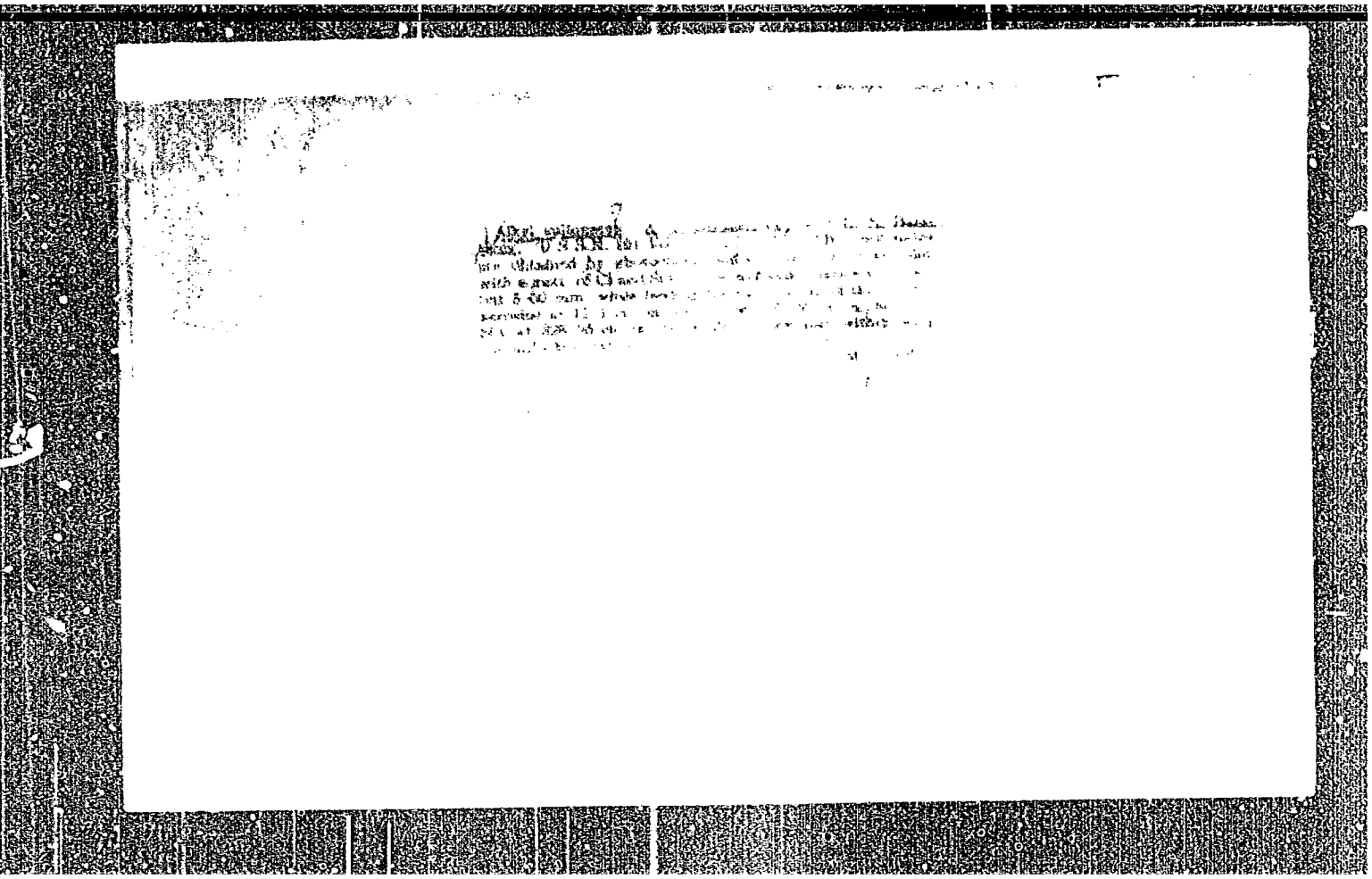
1. Ashkhabadskaya gidrometeorologicheskaya observatoriya.

GERSHENOVICH, A.I.; KHOMYAKOV, D.G.; BALAKIREV, Ye.S.

Acid chlorides of kerosine-fraction sulfonates. Patent U.S.S.R. 78,377, Dec.31, 1949.
(CA 47 no.19:10215 '53)

GERSHENOVICH, A.I.; KHOMYAKOV, D.G.; BALAKIREV, Ye.S.

Saponification of acid chloride sulfonates of kerosine fractions. Patent U.S.S.R. 78,378, Dec.31, 1949.
(OA 47 no.19:10215 '53)



GERSHENOVICH, A.I.; BALAKIREV, Ye.S.; OSTROUMOVA, V.V.

Continuous method of production of alkyl sulfonates.
Khim.prom. no.10:701-707 O '62. (MIRA 15:12)
(Sulfonic acid)

BALAKIREV, Ye. S.; GERSHENOVICH, A. I.; KORNEYEVA, M. V.

Sulfochlorination of the kerosine fractions of oils in the presence of initiators. Khim. prom. no.3:235-236 Mr '63. (MIRA 16:4)

(Kerosine) (Chlorosulfonylation)

AUTHOR: Balakirev, Yu. A., Engineer

TITLE: How to Detect Leakage in the Pump Tubing by a Dynamograph (Opredeleniye techi v nasosnykh trubakh dinamografom)

PERIODICAL: Neftyanik, 1958, Nr 2, p 11 (USSR)

ABSTRACT: The author states that the present method of detecting the leakage in the pump tubing of an oil well by a dynamograph is not accurate and can be used only when the leakage in the tubing exceeds the pressure capacity of the pump. Otherwise, it is almost impossible to detect the leakage. Moreover, in a number of cases the oil well operation must be interrupted for a considerable time. Therefore, the author, I.D. Nosov, and A. D. Shukhatovich developed a new method of detecting the leakage in the pump tubing by a dynamograph. This method is applied as follows: as soon as the dynamograph is put in contact with the cable string, the pump jack is released. When a few dynamograms are taken, the water line hose is put into the oil well and water is pumped in. Then dynamograms are taken again. It is understood, therefore, that the dynamograph is used before and after the water injection. If there is a leakage

How to Detect Leakage in the Pump Tubing (Cont.)

in the pump tubing, the contours of the dynamogram taken before and after the water injection will differ and will indicate that the hermetic sealing of the oil well equipment is disrupted. The advantage of this method is that it does not require a protracted interruption of the oil well operation. The method described for detecting leakage in the pump tubing is now frequently applied at the seventh oil field operating under the Petroleum Production Administration of the Ordzhonikidzeneft' organization. There are four dynamograms.

ASSOCIATION: Sed'moy promysel NPU Ordzhenikidzeneft' Neftepzomyslovogo upzavleniya (Seventh Oil Field of the Ordzhonikidzeneft' Petroleum Production Administration)

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BAJAKIREV, Yu.A.

Using a dynamograph for locating leaks in sucker rods.
Azerb. neft. khoz. 37 no.7:34 Jl '58. (MIRA 11:9)
(Sucker rods)

BALAKIREV, Yu.A.

Echogram distortions when using pneumatic cartridges. Neftianik 5 no.6:12-13 Je '60. (MIRA 13:7)

1. Inzhener promysla neftepromyslovogo upravleniya Ordzhonikidzeneft'

(Sound--Recording and reproduction)

A

BALAKIREV, Yu.; KROL', V.

Rapid treatment of oil wells with a plastic material.
Neftianik 6 no.12:11 D '61. (MIRA 14:12)
(Oil wells)

BALAKIREV, Yu.A.

How can dynamic level be determined from a dynamograph?
Neftianik 7 no.1:26-28 Ja. '62. (MIRA 15:2)

1. Nachal'nik otdela issledovaniya plastov i skvashin neftepromyslovogo upravleniya Ordzhonikidzeneft'.
(Liquid level indicators)
(Oil well pumps)

FAN-YUNG, A.F.; ZYKINA, T.F.; BALAKIREVA, B.N.; ITSKOVSKAYA, L.S.

Using the hot product pouring method for canning tomato paste in three-liter containers. Kons.i ov.prom. 18 no.5:16-20 My '63. (MIRA 16:4)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy promyshlennosti.
(Tomatoes, Canned)

[redacted], V. A.; [redacted], V. T.; [redacted], L. A.

Veterinary Medicine

Use of plasmon in veterinary practice. Veterinariya 29 No. 7 1952

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified

ANTSYFEROV, M.S., kand. fiziko-matematicheskikh nauk; NIKITCHENKO, R.F., insh.; KALAKIREVA, N.G., insh.

Apparatus for laboratory hydraulic modeling seismic phenomena in mine workings. Nauch. soob. IGD 11:118-125 '61. (MIRA 16:4)

(Blasting) (Hydraulic models)

BALABIKEVA,

PHASE I BOOK EXPLOITATION SOV/4303

Frunze. Universitet. Nauchnoye studencheskoye obshchestvo

Sbornik nauchnykh rabot studentov, vyp. 2 (Collection of Scientific Works of Students, No. 2) Frunze, 1959. 99 p. 500 copies printed.

Sponsoring Agency: Kirgizskiy gosudarstvennyy universitet. Nauchnoye studencheskoye obshchestvo.

Resp. Ed.: L. A. Spektorov, Docent; Tech. Ed.: N. A. Yefimov.

PURPOSE: This book is intended for mathematicians, natural scientists, and philologists.

COVERAGE: The collection of articles contains studies in mathematics and mechanics, physics, biology, and philology written by members of the Nauchnoye studencheskoye obshchestvo (Students' Scientific Association) of Kirgizskiy gosudarstvennyy universitet (Kirgiz State University) under the guidance of faculty members. References accompany each article.

PHYSICS

PHILOLOGY

BALAKIREVA, R.G.; KROPOTOVA, N.S.

Effectiveness of vaccination against influenza. Zhur.mikrobiol. epid. i immun. no.9:20-22 S '54. (MLRA 7:12)

1. Iz kafedry epidemiologii (zav. V.D.Solov'yev) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina i Podol'skoy gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach D.B.Rozenfel'd)

(INFLUENZA, prevention and control,
Russia, mass vacc. in Russia, results)
(VACCINES AND VACCINATION,
influenza, mass vacc. in Russia, results)

ACCESSION NR. AT4033991 S/0000/63/000/000/0087/0090

AUTHOR: Nikitina, V. I.; Maklakov, A. I.; Balakireva, R. S.; Pudovik, A. N.

TITLE: Polymers consisting of aromatic rings conjugated with hetero atoms. I. Polyphenylene- and polydiphenyleneimines.

SOURCE: Geterotsepny*ye vy*sokomolekulyarny*ye soyedineniya (Heterochain macromolecular compounds); sbornik statey. Moscow, Izd-vo "Nauka," 1963, 87-90

TOPIC TAGS: organic semiconductor, semiconducting polymer, polyphenyleneimine, polydiphenyleneimine, polymer electrical property

ABSTRACT: Polyphenyleneimines, semiconducting polymers containing NH groups between aromatic rings in the backbone, have been prepared, and their electrical and magnetic properties have been studied at the Kazanskiy gosudarstvenny*y universitet im. V. I. Ul'yanov-Lenina (Kazan' State University). Polycondensation of aromatic diamines with dihydric phenols was used. Polymer I was obtained from p-phenylenediamine and hydroquinone; II, from benzidine and hydroquinone;

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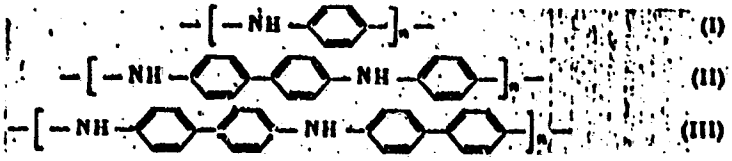
ACCESSION NR. AT4033991

and III, from benzidine and 4,4'-dihydroxybiphenyl. The polycondensation was carried out in the melt at 260—280C for 6 hr, and then at the same temperature and 1—2 mm Hg for 2 hr. All the polymers are black powders insoluble in the common organic solvents except dimethylformamide. Three types of polymers were prepared: reprecipitated (a), nonreprecipitated (b), and reprecipitated and heat-treated in air at 320C for 1 hr (c). On the basis of the synthesis method and IR spectroscopy, the following structures were



assumed. D-c electrical conductivity was determined for pellet samples at 20—100C. The temperature dependence of conductivity obeyed an exponential law fairly well. Numerical data are given in Table 1 of the Enclosure. All the samples exhibited high conductivity, positive magnetic susceptibility, and an EPR signal. The unpaired

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ACCESSION NR. AT4033991

electron concentration in Ia was calculated to be about 10^{19} — 10^{20} per gram. Orig. art. has: 2 tables, 1 figure, and 1 formula.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina(Kazan' State University)

SUBMITTED: 09Jul62 DATE ACQ: 30Apr64 ENCL: 01

SUB CODE: CH,PH NO REF SOV: 010 OTHER: 000

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ACCESSION NR: AT4033991

ENCLOSURE: 01

Table 1. Electrical and magnetic properties of polyphenylenaimines

Polymer	Sample	ρ_{20}, ohm^{-1} cm^{-1}	ρ_∞, ohm^{-1} cm^{-1}	E, ev	EPR line half width, oersted	Polymer	Sample	ρ_{20}, ohm^{-1} cm^{-1}	ρ_∞, ohm^{-1} cm^{-1}	E, ev	EPR line half width oersted
I	a	10^{-9}	10^{-4}	0.48	~7	II	a	10^{-9}	10^{-3}	0.68	~9
	c	10^{-10}	10^{-4}	0.60			b	10^{-12}	10^{-5}	0.86	
	a	10^{-11}	10^{-6}	0.68		III	a	10^{-10}	10^{-6}	0.50	~9

Card 4/4

DENISOVA, I.A.; BALAKIREVA, S.Yu.

Electrophoretic investigation of the proteins of blood serum in mammals, mainly in rodents. Zool. zhur. 42 no.2:268-273 '63.
(MIRA 16:3)

1. Department of Vertebrate Zoology, State University of Saratov.
(Paper electrophoresis) (Blood proteins) (Rodentia)

AUTHORS: Matrosova, M. S., Balakireva, Ye. P., 30V/64-58-4-15/20
Berman, S. I.

TITLE: Thermochemical Gas Analyzer of the Type TKhG-5 (Termokhimicheskiy gazoanalizator tipa TKhG-5)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 4, pp. 253 - 254 (USSR)

ABSTRACT: Thermochemical gas analyzers are produced in two types: in the one type the combustion takes place on a platinum wire which at the same time serves as thermocouple, in the other type a laminated catalyst is employed as well as a thermometer for measuring the heat effect. The second method has a few advantages so that an analyzer of this type, called TKhG - 5, was worked out by the OKBA (Experimental Construction Bureau for Automation). Platinum chloride on an aluminum oxide carrier was used as catalyst. The following apparatus were built among the further modifications: TKhG-5A with a scale 0 - 2% H_2 for the analysis of hydrogen in electrolytic oxygen, TKhG -5B with a scale of 0 - 1% O_2 for the analysis of oxygen in electrolytic hydrogen, and TKhG-5 V with scales 0 - 0,5% O_2 and 0 - 1% O_2 for the analysis of oxygen in generator gas. The error limit of the instrument is given as

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Thermochemical Gas Analyzer of the Type TKhG-5 SOV/64-58-4-15/20

3%; the authors give a diagram of this instrument and of the electric circuit with a corresponding description. The principle of measurement is based on the fact that an exothermal reaction is formed by the component of the gas mixture to be analysed, the heat formed being proportional to the amount of substance; the measurements are all carried out automatically. On the basis of the mentioned construction instruments can be produced for the analysis of hydrogen in a sample of industrial gases as well as of CO_2, SO_2, NH_3, CH_4 in the air, etc. There are 2 figures.

ASSOCIATION: Opytno-konstruktorskoye byuro avtomatiki (Experimental Construction Bureau for Automation)

1. Gas analyzers--Performance 2. Gas analyzers--Equipment

Card 2/2

BALAKIROV, Yu.A.

Determination of the saturation pressure of crude oil based on pressure build-up curves. Neftepром. delo no.3:16-19 '63. (MIRA 16:9)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot Neftepromyslovoge upravleniya "Peschanyy-neft'".

BALAKIREV, S. K.

Bor'ba za **tekhnicheskiy** progress v promyshlennosti Stalingrada (Struggle **for technical** progress in Stalingrad's heavy industry) Stalingrad, Stalingradskoye Knizhnoye Izd-vo, 1953.
125 p.

SO: 428N/5
740.02
.BI

BALAKIROV, S.A.; PREOBRAZHENSKIY, A.Yu., red.; FRASHENINNIKOVA, V.F., tekhn. red.

[Promoting technological development in stalingrad industry] Bor'ba za tekhnicheskii progress v promyshlennosti Stalingrada. Stalingrad, Stalingradskoe knizhnoe izd-vo, 1953. 125 p. (MIRA 15:7)

(Volgograd—Technological innovations)

BALAKIROV, Yu.A.; SULEYMANOV, A.B., red.; SHTEYNGEL', A.S., red. izd-va; MIRKISHIYEVA, S., tekhn. red.

[Results of the improvement of methods for studying oil wells and layers] Opyt sovershenstvovaniia metodov issledovaniia neftianykh skvazhin i plastov. Baku, Azerbaidzhanskoe gos.izd-vo, 1963. 109 p. (MIRA 16:8)
(Oil reservoir engineering)

BALAKIROV, Yu.A.

Graphs of pressure build-up curves of various production methods.
Izv.vys.ucheb.zav.; neft' i gaz 5 no.4:37-42 '62.
(MIRA 16:1)

1. Azerbaydzhanskiy institut nefti i khimii imeni M.Azizbekova.
(Oil reservoir engineering)

BALAKIROV, Yu.A.

New method for investigating lift wells. Neftepром. delo no.12: 13-16 '63. (MIRA 17:4)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot neftepromyslovogo upravleniye "Peschanyyneft'".

BALAKIROV, Yu.A.; KROL', V.S.

Acid and thermal-acid treatment of heavily drained wells by the pulse method. Neft. khoz. 41 no. 12:31-36 D '63.
(MIRA 17:6)

BALAKIROV, Yu.A.

Investigating wells exploited by hydraulic piston pumps. Neftepром. delo no.5:18-23 '64. (MIRA 17:9)

1. Neftepromyslovoye upravleniye "Peschanyynaft'".

BALAKIROV, Yu.A.; KROL', V.S.

Developing methods for stimulating the bottom zone of wells.
Neft. khoz. 42 no.11:9-12 N '64 (MIRA 18:2)

BALAKIROV, Yu.A.; AMIROV, A.D., kand. tekhn. nauk, red.; MUSAYEVA, E., red.

[Interference tests and thermography of oil wells and layers] Gidroproslushivanie i termografirovanie neftianykh skvazhin i plastov. Baku, Azerbaidzhanskoe gos. izd-vo, 1965. 199 p. (MIRA 18:10)

MATROSOVA, N.S.; BALAKIROVA, Ye.P.; BERMAN, S.I.

Thermochemical TKhO-5-type gas analyzer. Khim. prom. no.4:253-254 Je '58. (MIRA 12:1)

1.Opytno-konstruktorskoye byuro avtomatiki.
(Gases--Analysis)

BALAKIRSKAYA, R.E.; BATALIK, B.S.; NEL'SON, R.A.; MAKMENKO, V.V.

Investigating the influence of chilling on the phase composition and structure of clinkers. Nauch. trudy PermNIUI no.5:95-102 '63. (MIRA 18:3)

BALAKIRSKAYA, V.L.; SHTARKMAN, B.P.

Pyonometric method for the determination of the density of powdered polyvinyl chloride. Plast.massy no.4:63-64 '63. (MIRA 16:4)
(Vinyl compound polymers--Density)

BALAKIRSKAYA, V.I.; SHTARKMAN, B.P.

Physical characteristics of powderlike polyvinyl chloride. Plast. massy no.9:62-64 '64. (MIRA 17:10)

TOPIC TAGS: polyvinyl chloride, particle size, density determination

ABSTRACT: Particles which are conglomerates of primary polymer seeds are formed during the suspension polymerization of vinyl chloride. This work was concerned with the study of the structure of the individual particles and the morphological

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chloride suspension and its morphological heterogeneity is evident in the technological behavior of suspensions. This is extremely noticeable in the production of items containing plasticizers. This is explained by the fact that the plasti-

S/152/62/000/011/001/001
B126/B186

AUTHORS: Balakishiyev, G. A., Ismailov, R. G., Korneyev, M. I., Mezhebovskiy, Ye. B.

TITLE: Influence of ultrasonic energy on the cracking process of solar oil distillate

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 11, 1962, 59 - 62

TEXT: Ultrasonic experiments were carried out on a pilot plant for continuous thermal cracking with a view to reduct the processing temperature. A standard magnetostriction ПМС-7 (PMS-7) projector of 21 kc/s fundamental oscillation frequency introduced the ultrasonic energy direct into the reaction zone. The projector was fed from a УЗМ-10 (UZM-10) ultrasonic generator manufactured in series production. The analytical data of the distillate used were as follows: specific gravity 0.8952, initial boiling point 284°C, evaporation E°, %, 9 at 300°C, 36 at 325°C, 76 at 350°C. The temperatures applied were 440, 420 and 380°C respectively, the pressure was 30 atm and the cracking period 30 minutes. The experiments showed that the application of ultrasonics intensifies the cracking process and accelerates

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the reaction so that with greater ultrasonic intensity the productivity of the plant increases. The cracking results at 440°C without application of ultrasonic energy were almost the same as those at 420°C with ultrasonic energy. This implies that the use of ultrasonics enables thermal cracking to be carried out at lower temperatures. Moreover, when ultrasonic energy is applied the coke deposits are reduced and the coke is soft and easily removable. There are 4 figures.

ASSOCIATION: Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova (Azerbaydzhan Institute of Petroleum and Chemistry imeni M. Azizbekov); NIPI "Neftekhimavtomat" (NIPI "Neftekhimavtomat")

SUBMITTED: July 16, 1962

BALAKISHIYEV, G.A.; KOLCHIN, V.A.

Theory of ultrasonic flowmeters. Za tekh. prog. 3 no.7:8-9,19 Jl '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy i proyektnyy institut "Neftekhimavtomat."

BALAKISHIYEV, G.A.; ISMAILOV, R.G.; KORNEYEV, M.I.; MEZHEBOVSKIY, Ye.B.

Effect of ultrasonic energy on the cracking of solar oil distillate. Izv. vys. ucheb. zav.; neft' i gaz 5 no.11: 59-62 '62. (MIRA 17:6)

1. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova i Nauchno-issledovatel'skiy i proyektnyy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti.

USSR / Human and Animal Morphology (Normal and Pathological). Nervous System. Peripheral Nervous System. S

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16931

Author : Balakishiyev, K. A.
Inst : Azerbaydzhan State Medical Institute
Title : On the Anatomy of the Intracranial Part of the Facial Nerve

Orig Pub : Sb. tr. Azerb. gos. med. in-ta, 1956, vyp 2, 106-110

Abstract : The facial nerve (FN) exits to the base of the brain at the front and more laterally than the olive at the posterior margin of the cerebellar peduncle. In the canal of the temporal bone 3 types of paths for FN are possible: steep, sloping and median (oblique).

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USSR / Human and Animal Morphology (Normal and Pathological). Nervous System. Peripheral Nervous System. S

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16931

Five branches whose composition and passage are described in detail go off along the length of the canal from the FN trunk. The connections of the intracranial part of FN with the nerves which have with it segmentary and nuclear community, specifically with the glossopharyngeal, vagus and lingual nerves, are noted. -- T. N. Ulissova

Card 2/2

BALAKISHIYEV, K.A. (Baku, ul. Engel'sa, 10, kv.26)

History of the Chair of Normal Anatomy of the N.Narimanov Azerbaijani State Medical Institute. Arkh. anat. gist. i embr. 40 no.5:89-92 My '61. (MIRA 15:4)

1. Kafedra normal'noy anatomii (zav. - zasluzhennyy deyatel' nauki prof. K.A.Balakishiyev) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta imeni N.Narimanova.
(AZERBAIJAN--ANATOMY--STUDY AND TEACHING)

BALAKISHIYEV, K.A. (Baku, ul. Engel'sa, 10, kv.26)

Account of the work of the Azerbaijani Scientific Society of Anatomists, Histologists and Embryologists. Arkh.anat., gist i embr. 43 no.7:124-127 Jl '62. (MIRA 15:9)

1. Predsedatel' pravleniya Azerbaydzhanskogo nauchnogo obshchestva anatomov, gistologov i embriologov.
(AZERBAIJAN—BIOLOGICAL SOCIETIES)

BALAKISHIYEV, Kyamil' Abdul-Salam, zasl. deyatel' nauki, prof.;
MUSLUMOV, M., red.

[Anatomical nomenclature in Latin, Azerbaijani and Russian. Compiled on the basis of the Paris International Anatomical Nomenclature] Anatomicheskaia nomenklatura na latinskom, azerbaidzhanskom i russkom iazykakh. Sostavlena na osnove Mezhdunarodnoi Parizhskoi anatomicheskoi nomenklatury. Baku, Azerbaidzhanskoe gos.izd-vo uchebno-pedagog. lit-ry, 1964. 270 p. (MIRA 17:5)

BALAKISHIYEVA, B.A.; SELIMKHANOV, I.R.

Quantitative spectrum determination of cadmium in minerals and rocks. Dokl. AN Azerb. SSR 18 no.11:41-45 '62. (MIRA 17:2)

1. Predstavleno akademikom AN AzSSR M.A. Kashkayevm.

BALAKISHIYEVA, B.A.

Quantitative spectral determination of In, Ga, Ge, Ti, and Ag in minerals and rocks. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.1:49-56 '64. (MIRA 18:6)

BALAKLEYETS, I. I., CHERSALIN, V. N., SYTIN, V. P., SHVEBELBLIT, K. G., and PETROVA, N. S.

"New methods of preparing alpha, beta, and gamma sources," a paper submitted at the International Conference on Radioisotopes in Scientific Research, Paris, 9-20 Sep 57.

BALAKLEYETS, R.M.

Use of ridinole and cyclodole in some organic diseases of the central nervous system. Zhur. nevr. i psikh. 62 no.2: 243-245 '62. (MIRA 15:6)

1. Klinika nervnykh bolezney (zav. kafedroy - prof. A.I. Zlatoverov) Kuybyshevskogo meditsinskogo instituta.
(NERVOUS SYSTEM—DISEASES)
(AUTONOMIC DRUGS)

OSTROVSKIY, Yu.M.; BALAKLEYEVSKIY, A.I.

Thiamine formation from thiochrome in animal tissues. Dokl. AN SSSR 135 no.4:995-997 '60. (MIRA 13:11)

1. Grodnenskiy gosudarstvennyy meditsinskiy institut. Predstavleno akademikom V.A.Engel'gardtom.
(Thiamine) (Thiochrome)

OSTROVSKIY, Yu. M.; LUKASHIK, N. K.; RAZUMOVICH, A. N.; TREBUKHINA, R. V.; DOSTA, G.; BALAKIEYEVSKIY, A. I.; MADZHUL, A.

"On the Participation of Thiamine in Specific and Nonspecific Regulation of Some Metabolic Pathways."

report submitted for 6th Intl Biochemistry Cong, New York City, 26 Jul-1 Aug 1964.

OSTROVSKIY, Yu.M.; LUKASHIK, N.K.; RAZUMOVICH, A.N.; BALAKLEYEVSKIY, A.I.; DOSTA, G.A.; TREBUKHINA, R.V.; LARIN, R.S.; KARPUT', S.N.; KOMAROVA, B.P.; NEPOCHELOVICH, N.S.; DVORYANINOVICH, L.N.; MOYSEYENOK, A.G.; MANDRIK, K.A.; GALITSKIY, E.A.; MATYSIK, M.S.; PODOBED, V.G.; MAKARINA-KIBAK, L.Ya.

Differentiation of specific and nonspecific metabolic shifts in an acute avitaminosis B_1 caused by oxythiamine. Vop.pit. 24 no.4:41-48 Jl-Ag '65. (MIRA 18:12)

1. Kafedra biokhimii (zav. - dotsent Yu.M.Ostrovskiy) meditsinskogo instituta, Grodno. Submitted July 23, 1964.

BALAKLEYTSEVA, L.F.; KORETSKAYA, A.I.; KUDRYAVTSEV, G.I.

Polyamidoesters and fibers based on them. Khim.volok no.6:31-34 '63.
(MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

BALAKLITSKIY, I.M.; BULGAKOV, A.A.

Two methods for microwave power stabilization. Radiotekhnika 18 no.10:63-66 O '63. (MIRA 16:12)

BALAKLO, G.

Initiative of Mikahil Belitskii's brigade. Mast. ugl. 7 no.9:13 S '58. (MIRA 11:10)

1. Sekretar' Novoshakhtinskogo gorkoma kommunisticheskoy partii Sovetskogo Soyuza.
(Coal mines and mining)

30140
S/194/61/000/007/070/079
D201/D305

9,2571 (1147)

AUTHORS: Mikhaylovskiy, L.K., Balakov, V.F. and Pollak, B.P.

TITLE: Conversion of electromagnetic oscillations of ultra-high frequency in ferrites

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 3, abstract 7 K13 (V sb. Ferrity. Fiz. i fiz.-khim. svoystva, Minsk, AN BSSR, 1960, 560-566)

TEXT: Detection, multiplication and mixing of frequencies have been investigated using ferrites in the 3 cm range. Several models have been constructed of pulsed SHF-power indicators. The dependence has been confirmed of the conversion of a ferrite multiplier on the geometrical dimensions of ferrite and on the level of the applied SHF-power. The shape of the signals obtained after conversion, did not differ practically from that obtained from a crystal-mixer. The conversion gain of a ferrite mixer was found to be much smaller than that of a crystal-mixer. 5 references. [Abstracter's note: Complete translation]

Card 1/1

L 10299-66 EWT(d)/EWT(l)/EWA(h) IJP(c)
ACC NR: AP5026894 SOURCE CODE: UR/0109/65/010/010/1739/1752

AUTHOR: Mikhaylovskiy, L. K.; Pollak, B. P.; Balakov, V. F.; Khanamirov, A. Ye.

ORG: none

TITLE: Characteristics and uses of single-magnetic-axis ferrites in the millimeter band (A review)

SOURCE: Radiotekhnika i elektronika, v. 10, no. 10, 1965, 1739-1752

TOPIC TAGS: ferrite, anisotropic ferrite, millimeter wave

ABSTRACT: Based on 1935-65 Soviet and 1948-63 Western published sources and also on some recent Soviet experimental data (coercitive force, ferromagnetic resonance, ferrite valve), this review covers the following subjects: Ferromagnetic resonance in anisotropic ferrites at moderate external magnetic fields;

Card 1/2 UDC: 621.318.134.029.65.001.8

L 10299-66

ACC NR: AP5026894

12

shf parameters of anisotropic ferrites and methods of measurement; characteristics and variation of composition of $BaO \cdot 6Fe_2O_3$ and $SrO \cdot 6Fe_2O_3$ ferrites; measured effective anisotropy field of polycrystalline ferrites in the 4- and 8-mm bands; resonant field as a function of the angle between the anisotropy axis and the external bias direction; peculiarities of high- and low-coercitivity anisotropic ferrites; ferroresonance phenomena and their theory; ferrite-loaded waveguide sections (resonant valves); ferrite mixers. "The authors wish to thank S. A. Medvedev and K. M. Polivanov for lending specimens of tested materials and for their attention to the work; and also G. Ya. Bizyayev and O. A. Sokolov for their part in the experimental work." Orig. art. has: 10 figures and 6 formulas.

SUB CODE: 09 / SUBM DATE: 14Aug64 / ORIG REF: 008 / OTH REF: 009

Card 2/2

ACC NR: AT6028993 SOURCE CODE: UR/0000/66/000/000/0310/0315

AUTHORS: Mikhaylovskiy, L. K.; Balakov, V. P.; Puchkov, V. S.; Radchenko, V. F.

ORG: none

TITLE: Mixing of electromagnetic signals on a magnetically monoaxial ferrite

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fiziko-khimicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 310-315

TOPIC TAGS: ferrite, magnetic property, magnetic material, electromagnetic mixing

ABSTRACT: The possibility of constructing ferrite mixers for use in the 4-mm wavelength range was investigated. This work supplements the results of K. M. Polivanov, L. K. Mikhaylovskiy, S. A. Medvedev, B. P. Pollak, and V. F. Balakov (Sb. Ferrity, Izd. AN BSSR, Minsk, 567, 1960). The experiments were carried out on magnetically monoaxial ferrite specimens. The experimental procedure was identical to the one described by L. K. Mikhaylovskiy, V. P. Makarishchev, B. P. Pollak, and V. A. Fabrikov (Radiotekhnika i elektronika, No. 7, 1178, 1961). It was found that the intensity of the intermediate signal P_{int} was given by $P_{int} = AP_sP_g$, where A is a constant characteristic of the particular ferrite, P_s -- the intensity of the ultrahigh frequency signal, and P_g -- the intensity of the heterodyne signal respectively.

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ACC NR: AT6028993

The authors conclude that it is possible, in principle, to mix two electromagnetic signals in the millimeter wavelength region by means of magnetically monoaxial ferrites at relatively small external magnetizing fields. Orig. art. has: 5 equations.

SUB CODE: 09, 11/ SUBM DATE: 22Dec65/ ORIG REF: 003
20

Card 2/2

BALAKOV, V.V.

AMS/A-1 B

F

MAR 1951

3.3-43

Balakov, V. V., Vakadi, V. G. and Krivo[illegible], Izmerenie kontsentratsii atmosfernogo ozona [illegible] ultrafioletovym [illegible]. [Measurements of ozone content by the ultraviolet absorption method.] (In Trudy El'brusskoi Ekspeditsii Akademii Nauk, SSSR i Vsesoiuznogo Instituta Eksperimental'noi Meditsiny 1934 i 1935. [Reports of the Elbrus Expedition 1934 and 1935.] Moscow, 1936. p. 109-116, 4 figs., 16 refs., equations. English summary p. 116. [Ak. Nauk, SSSR, Komissiia po izucheniiu stratosfery, Tom II]) DLC—Measurements were made at 2300 and 4300 m. elevations on Mt. Elbrus by photographing the spectrum of mercury with a quartz prism. Instruments described and illustrated, and measurements at different elevations plotted on a scatter diagram. Subject Headings: Mountain meteorology, Ozone measurements, Elbrus Expedition, U.S.S.R.—M.R.

ATD SLA METEOROLOGICAL LITERATURE CLASSIFICATION