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SAVASTEYEV, V. G.

Electric Driving

Rational law of changes in the rectified voltage of an ion electric drive during starting a and slowing down of a hoisting apparatus. Nauch. trudy. Mosk. gor. inst., No. 8, 1950

9. Monthly List of Russian Accessions, Library of Congress, October 1952, Uncl.

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SOV/112-58-1-553

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, pp 81-82 (USSR)

AUTHOR: Savasteyev, V. G.

TITLE: Elements of the Optimum Conditions of an Automatic Mine Hoist (Elementy optimal'nogo rezhima avtomatizirovannogo rudnichnogo pod"yema)

PERIODICAL: V sb.: Avtomatizatsiya v ugol'n. prom-sti, Moscow, Ugletekhizdat, 1956, pp 109-126

ABSTRACT: The choice of optimum operating conditions is considered for a mine hoist being converted to automatic control. It is proved that, for this case, determining optimum conditions on the basis of the minimum cost of hoisting the useful-mineral unit is insufficient. It is suggested that two more conditions be added: (1) the maximum productivity of the hoisting machine, and (2) the maximum permissible values of stresses in the structural members of the hoisting installation. To analyze optimum operating conditions, hoist operation is broken into two time-periods: (1) "slack" take-up and rope tightening with the lower vessel at standstill; (2) hoisting the lower vessel.

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Elements of the Optimum Conditions of an Automatic Mine Hoist

A mathematical investigation of the well-known kinematic and dynamic equations of a mine hoist has proved the following: (a) during "slack" take-up and rope tightening, optimum conditions result if the motor torque, rising continuously, reaches $M = (0.8-1.0)\ M_s$ at the instant the vessel is lifted from the support beams or cams, where M_s is the static torque at the motor shaft caused by 100% fill of the lower vessel; (b) operating conditions of an automatic mine hoist during starting (from the instant of the first movement of the lower vessel), uniform travel, and deceleration will be optimum in the case where vessel travel is maintained with a given accuracy and when the modulus-limited first, second, and third derivatives of the travel by time (which are elements of the optimum conditions) are kept at their maximum permissible values. Detailed calculations and a method of plotting optimum diagrams for a simple-cage hoist are presented. The above method is applicable to constructing optimum diagrams for installations with any number of drives, with tipping cages or skips. A generalization of the method is given for the case of limiting any number of derivatives of travel by time.

A.V.S.

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1. Underground structures--Equipment 2. Hoists--Control system
3. Hoists--Mathematical analysis 4. Hoists--Performance
5. Hoists--Costs

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SAVASTEYEV, V.G., dotsent, kand.tekhn.nauk

Using frequency methods to investigate automatized electric drives on mine hoists. Nauch.trudy MGI no.17:219-234 '56. (MIRA 10:11)
(Mine hoisting--Electric driving) (Automatic control)

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SAVASTEYEV, V.G., dots., kand. tekhn. nauk; KOVALEV, A.N., otvetstvennyy red.; NOVAKOVSKIY, G.L., tekhn. red.

[Principles of Laplace transformation applied to problems in automatic mining machinery] Osnovy preobrazovaniia Laplasa primenitel'no k zadacham rudnichnoi avtomatiki. Moskva, Mosk. gornyi in-t im. I.V. Stalina, 1957. 32 p. (MIRA 11:7)
(Laplace, Transformation) (Mining machinery)

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18(5) SOV/112-59-1-851

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 114 (USSR)

AUTHOR: Savasteyev, V. G.

TITLE: Analysis by the Frequency Method of a Linear Mine-Hoist Automatic System

PERIODICAL: V sb.: Gorn. elektrotekhnika. M., Ugletekhizdat, 1957, pp 201-224

ABSTRACT: Bibliographic entry.

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SAVASTEYEV, Valentin Gavrilovich,; LYUBIMOV, N.G.,otv. red.; KOTEL'NIKOVA, G.A.,red. izd-va,; SABITOV, A., tekhn.red.

[Automatic and remote control in mines] Rudnichnaia avtomatika i telemekhanika. Moskva, Ugletekhizdat, 1958. 428 p. (MIRA 11:12)
(Automatic control)
(Remote control)
(Mining engineering)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVASTEYEV, V.G., dots.

Investigating mining equipment and systems of automatic control by means of electronic modeling. Izv.vys.ucheb.zav.; gor.zhur. no.1:73-86 '59. (MIRA 13:1)

1. Moskovskiy gornyy institut.
(Mining machinery--Electromechanical analogies)

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28.1000

AUTHOR: Savasteyev, V. G., Docent

TITLE: Determination of the Optimum Generalized Real Frequency Characteristic

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Gornyy zhurnal, 1960, No. 9, pp. 103-108

TEXT: The following problem is posed in the present paper: the optimum generalized real frequency characteristic for a given transient should be found in order to determine, with its aid, the structure and the parameters of the system warranting an optimum transient. The problem is solved with the aid of Fig. 1 which shows the curve for the given transient of a hoisting unit. It is assumed that an optimum process takes place in a closed automatic control system of the hoisting unit according to this curve. The principal demand made on such a transient is the dynamic and static accuracy, i.e., that the quantity x(t) of the control effect f(t) to be controlled is reproduced with the required accuracy. With all possible changes of the interference quantity $M_c(t)$ (on the condition that

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M_c is a differentiable function), $x(t)$ must not differ from $f(t)$ by more than $\pm\Delta$: $\varepsilon(t) = af(t) \mp bx(t) \leqslant \Delta$, where Δ is a small allowed error. The $x(t)$-curve in the diagram (Fig. 1) is approximated by conjugate straight-lined sections, and perpendiculars are drawn from the conjugate points to the time axis. The angle of inclination β of each straight-lined section with the time axis is constant. The perpendiculars drawn from the conjugate points cut off t_k-sections from the time axis, where $k = 1, 2, 3, \ldots, n$. Formula (16) is derived:

$R_{optim}(\omega) = \frac{1}{\omega}\sum_{k=1}^{n} \beta_k(\sin\omega t_k - \sin\omega t_{k-1})$. This function $R_{optim}(\omega)$ is the optimum generalized real frequency characteristic for the optimum transient which must take place in a closed system in the presence of a control effect and an interference quantity. At $\omega = 0$, $\sin\omega t = 0$; and at three approximating sections ($n = 3$), formula (22) is obtained: $R_{optim}(0) = \beta_1 t_1 + \beta_2(t_2 - t_1) + \beta_3(t_3 - t_2)$. Table 1 gives the values

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Determination of the Optimum Generalized Real Frequency Characteristic S/150/60/000/009/002/002/XX B012/B054

calculated from formulas (16) and (22) for the transient shown in Fig. 1. Fig. 2 shows the $R_{optim}(\omega)$-curve which was constructed according to the data of Table 1. It is pointed out that the optimum only holds for the particular case. The curve will have a different shape for another transient. The publication of this article was recommended by the kafedra elektrooborudovaniya promyshlennykh predpriyatiy (Chair of Electrical Equipment of Industrial Enterprises). There are 2 figures, 1 table, and 6 Soviet references.

ASSOCIATION: Vsesoyuznyy zaochnyy politekhnicheskiy institut (All-Union Polytechnic Correspondence Institute)

SUBMITTED: April 2, 1960

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26.2195

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AUTHOR: Savasteyev, V.G.

TITLE: A synthesis of correcting devices of continuous automatic control linear systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, elektromekhanika, no. 4, 1961, 71-84

TEXT: The author discusses a new mathematical approach, developed to resolve the problem of choosing such control devices as would give an optimal response of the equipment being controlled. It is stated that in practice, the method of synthesis based on logarithmic frequency characteristics has some disadvantages, namely: 1) The need to know in advance the transfer coefficient of a closed loop system and also the order of instability i.e. the number of integrating units connected in series; this information is not usually available before the synthesis is made; 2) The inter-

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ference and initial values are not taken into account; 3) The only possibility is a synthesis of correcting devices connected in series, and others. The need is stated for research on new methods of synthesis of correcting devices. First the author deals with determining the generalized characteristic of real frequency for a non-corrected system.

Fig. 1. The curve of predetermined transient response.

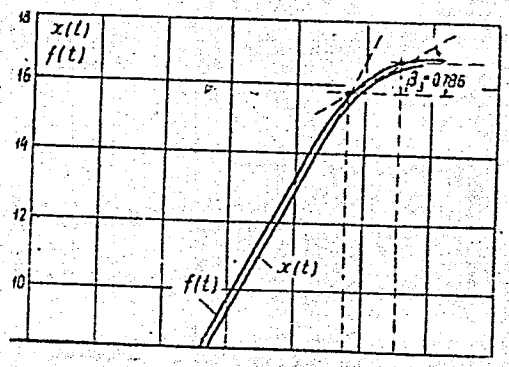

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Fig. 1 (cont'd)

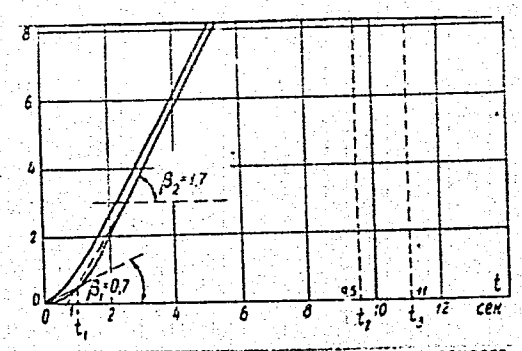

Рис. 1. Кривая заданного переходного процесса.

A series connected system consisting of basic equipment, an item to be controlled, a current modifier, an amplifier etc. has a non-corrected response shown in Fig. 1. The author uses Carson's notation for the operational form of differential equations. It is assumed, for this example, that there are one or two "series

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connected" amplifiers linked by a transfer function $W_1(p)$. The following elements of the system are noted $W_2(p)$ .... $W_n(p)$. The transfer function for the open loop of the system is

$$W(p) = W_1(p) \cdot W_2(p) \ldots W_n(p). \quad (1)$$

Apart from the control action f(t), an interference action $M_c(t)$ is assumed. There will then be 2 transfer functions: 1) with reference to the control

$$\Phi_y(p) = \frac{X(p)}{F(p)} \quad (2)$$

2) with reference to the interference

$$\Phi_B(p) = -\frac{X(p)}{M_c(p)} \quad (3)$$

If the initial conditions are not zeros, there will be a third transfer function with reference to initial conditions. The regulated change may be expressed by

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$$X(p) = \Phi_y(p) \cdot F(p) - \Phi_B(p) \cdot M_c(p) \quad (4)$$

If in (4) p is replaced by $j\omega$ and the real and imaginary variables are separated, the expression

$$X(j\omega) = \Phi_y(j\omega) \cdot F(j\omega) - \Phi_B(j\omega) \cdot M_c(j\omega) = R(\omega) + jS(\omega) \quad (5)$$

is obtained. If ω is changed from 0 up to the required value ω_c, $R(\omega)$ could be found for all values ω and the curve is obtained. Next the author examines the determining of an optimal generalized characteristic of a real frequency for an optimal transient response of a closed loop system. It is assumed now that Fig. 1 represents the response under optimum conditions for a closed loop system. The main requirements are the dynamic and static accuracy i.e. that in obtaining a regulated function x(t) by the governing action f(t). The regulated quantity x(t) should not differ during the transient period from the governing action f(t) by more than a small value $\pm \Delta$, at all possible changes of interference $M_c(t)$ within admissible limits, and under the condition that $M_c(t)$ is a

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function which could be differentiated, i.e. $\varepsilon(t) = af(t) \mp bx(t) \leq \Delta$. The curve x(t) may be approximated by short straight lines as shown in Fig. 1, where the intervals of time are:

$t_1 = 1$ сек; $\beta_1 = 0{,}7$;
$t_2 = 9{,}5$ сек; $t_2 - t_1 = 9{,}5 - 1 = 8{,}5$ сек; $\beta_2 = 1{,}7$;
$t_3 = 11$ сек; $t_3 - t_2 = 11 - 9{,}5 = 1{,}5$ сек; $\beta_3 = 0{,}786$;
$t_4 = \infty$; $\beta_4 = 0$.

The Laplace Carson transform for the derivative regulated variable with respect to time $\frac{dx}{dt}$ is given by

$$pX(p) = p \int_0^\infty \frac{dx}{dt} e^{-pt} dt. \qquad (7)$$

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For the interval of time $t_k - t_{k-1}$ the curve x(t) (Fig. 1) is a straight line, thus the derivative $\frac{dx}{dt} \simeq \beta_k$, (8), where β_k is a constant, which could be determined in accordance with Fig. 1 from

$$\beta_k = \frac{x(t_k) - x(t_{k-1})}{t_k - t_{k-1}}; \quad t_{k-1} < t < t_k. \tag{9}$$

From (8) and (9), for the time interval $t_k - t_{k-1}$, the author obtains

$$pX_k(p) = p\beta_k \int_{t_{k-1}}^{t_k} e^{-pt} dt. \tag{10}$$

The operational form of the optimal transient response is

$$X_{opt.}(p) = \sum_{k=1}^{n} \beta_k \int_{t_{k-1}}^{t_k} e^{-pt}\, dt \tag{12}$$

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Integrating (12), then replacing p by $j\omega$ and using Euler's equation

$$\cos \omega t - j \sin \omega t = e^{-j\omega t} \tag{15}$$

expressions

$$X_{opt.}(j\omega) = -\frac{1}{j\omega}\sum_{k=1}^{n} \beta_k [(\cos\omega t_k - j\sin\omega t_k) - (\cos\omega t_{k-1} - j\sin\omega t_{k-1})] \tag{16}$$

$$X_{opt.}(j\omega) = \frac{1}{-j\omega}\sum_{k=1}^{n} \beta_k [(\cos\omega t_k - \cos\omega t_{k-1}) - j(\sin\omega t_k - \sin\omega t_{k-1})] \tag{17}$$

are obtained.

$$R_{opt.}(\omega) = \frac{1}{\omega}\sum_{k=1}^{n} \beta_k (\sin\omega t_k - \sin\omega t_{k-1}), \tag{21}$$

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$$S_{opt.}(\omega) = \frac{1}{\omega} \sum_{k=1}^{n} \beta_k (\cos\omega t_k - \cos\omega t_{k-1}). \quad (22)$$

Eqs. (21) and (22) represent optimal generalized real and imaginary frequency characteristics of a closed loop system with the presence of the interference action. Eq. (21) could be written in the form

$$R_{opt.}(\omega) = \sum_{k=1}^{n} \beta_k \left(\frac{\sin\omega t_k}{\omega} - \frac{\sin\omega t_{k-1}}{\omega}\right). \quad (23)$$

When $\omega = 0$, $\sin\omega t = 0$, and Eq. (23) assumes the form of an undetermined expression

$$R_{opt.}(0) = \sum_{k=1}^{n} \beta_k \left(\frac{0}{0} - \frac{0}{0}\right). \quad (24)$$

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This undetermined relation could be transformed into a determined one by the application of Lopital's rule, which is given here in an abbreviated form:

$$\lim_{x\to 0} \frac{f(x)}{\varphi(x)} = \lim_{x\to 0} \frac{f'(x)}{\varphi'(x)} \tag{25}$$

as in the present case, $x = \omega t_k$; $d(\omega t_k) = \omega' t_k = t_k$, applying Lopital's rule to (23) the author obtains

$$\lim_{\omega\to 0} \frac{\sin\omega t_k}{\omega} - \frac{\sin\omega t_{k-1}}{\omega} = (t_k - t_{k-1}).$$

Then Eq. (23) for $\omega = 0$ could be written

$$R_{opt.}(0) = \sum_{k=1}^{n} \beta_k (t_k - t_{k-1}). \tag{26}$$

For Fig. 2, for 3 approximating intervals (n = 3), the author

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arrives at $R_{opt.}(0) = \beta_1 t_1 + \beta_2(t_2 - t_1) + \beta_3(t_3 - t_2)$. (27)

Table 1 shows the results of calculation from formulae (27) and (21) for a response shown in Fig. 2.

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Table 1.

Таблица 1

ω	$\frac{1}{\omega}$	$\omega t_1°$	$\omega t_2°$	$\omega t_3°$	$\sin \omega t_1$	$\sin \omega t_2$	$\sin \omega t_3$	$R_{опт}(\omega)$
0,0	—	—	—	—	—	—	—	+16,33
0,05	20	2°42′	27°12′	31°24′	0,0474	0,457	0,52	+15,7
0,1	10	5°45′	53°20′	62°50′	0,1	0,8	0,8897	+13,3
0,2	5	11°30′	90°+18°30′	90°+35°30′	0,1994	0,948	0,81	+6,6
0,3	3,33	17°10′	90°+73°15′	180°+8°30′	0,295	0,288	−0,148	−0,5
0,4	2,5	23°	180°+57°	180°+71°	0,39	−0,838	−0,945	−5,4
0,5	2,0	28°36′	270°+2°	270°+54°	0,4787	−0,9994	−0,588	−3,7
0,7	1,42	40°	20°	80°	0,643	0,342	0,9848	+0,62
0,8	1,25	45°42′	74°	90°+52°	0,716	0,96	0,616	+0,81
1,0	1,0	57°17′	180°+4°	270°	0,8387	0,0698	0	−0,768
1,2	0,834	68°36′	270°+22°	34°	0,931	−0,927	0,56	−1,11
1,3	0,77	74°18′	270°+75°	90°+7°	0,963	−0,259	0,99	−0,326

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Fig. 2. The optimal generalized real frequency characteristic.

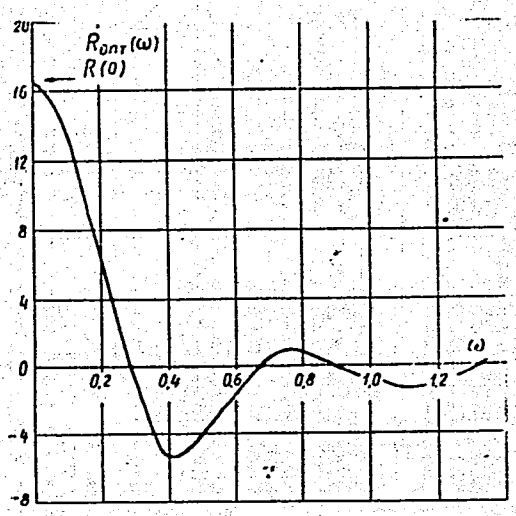

Рис. 2. Оптимальная обобщенная вещественная частотная характеристика.

Fig. 2

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The approximation at some points of the function $R(\omega)$ to the function $R_{opt.}(\omega)$ is then examined. It has been shown, says the author, that systems of automatic control having identical real frequency characteristics have an identical transient response, or the same quality of regulation. In order that a designed system can have an optimal transient response, it is necessary that its $R(\omega)$ should coincide with $R_{opt}(\omega)$. Such a coincidence will take place at all frequencies from $\omega = 0$ to ω_c, where ω_c is such a frequency at which $/R(\omega)/ \leqslant (0.1 \div 0.2)\ R(0)$. However, it has not yet been possible to achieve such an approximation and it is necessary to select that portion of the characteristic which appears to be essential for the scheme. If great repeating accuracy of the governing action be required in the last stage of the period, it will be necessary to achieve approximation $R(\omega)$ to $R_{opt}(\omega)$ at the values $\omega \to 0$. If a quick response is needed $R(\omega)$ should be approximated to $R_{opt}(\omega)$, at frequencies when $R_{opt} \to 0$. In order to

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approximate $R(\omega)$ to $R_{opt}(\omega)$ it is necessary to change accordingly either the structure or the parameters of the non-corrected system. Certain authors, including T.M. Sokolov and B.A. Bodner /Abstractor's note: No references given/ came to the conclusion that it was impossible to achieve a synthesis of the structure of the correcting devices, although it was possible to determine their parameters. When determining the equivalent parameters of correcting elements of a system, the author considers the introduction of correcting devices into an automatic system from the view point of economy. In a series system, it is advisable to introduce them directly after a comparing element or after the first element. The "parallel connected" correcting elements should be connected in shunt to the first or the second element or in shunt of both. The author assumes that ω_k and the economically corrected elements are determined. The generalized real frequency characteristic of the non-corrected system can then be written in the form:

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$$R(\omega_k, T_{eq.i}, k_{eq.i}), \quad (28)$$

where $T_{eq.i}$, $k_{eq.i}$ = the equivalent unknown parameters of the corrected elements. The latter could be found from

$$R(\omega_k, T_{eq.i}, k_{eq.i}) = R_{opt}(\omega_k). \quad (29)$$

Should the corrected part of the system be represented by a differential equation of the first order, there will be two parameters in one plane. Should the corrected part be represented by a differential equation of the second order, there will be three unknown parameters $T_{oeq.}^2$, T_{eq}, and k, which will give a curve in the space. The simplest case is when the corrected part is represented by an amplifier. Then the unknown parameter shall be only $k_{eq.i}$. Calculating $R(\omega)$ and $R_{opt}(\omega)$ is very laborious, and in some cases it is not required. For instance, when high accuracy in simulating

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the governing action is required only at the end of the transient period (as in mining), then the interval of the frequencies could be determined without constructing $R(\omega)$ and $R_{opt}(\omega)$. According to the theorem of finite values $x(\infty) = R(0)$ or the transfer function $x(t)$ in infinity behaves as the real frequency characteristic $R(\omega)$ in zero. According to theorem of initial values $x(0) = R(\infty)$ (30) or the transfer function $x(t)$ in zero behaves as the real frequency characteristic $R(\omega)$ in infinity. In the section on determining the structure and the parameters of the correcting devices connected in parallel, the author analyzes a few cases depending on the character of the correcting elements: 1) The corrected part of the system represents the first unstable element: a) We assume that the equivalent parameters of the corrected part are determined from (29) and are such, that

$$T_{eq.1} < T_1 \qquad (31)$$
$$k_{eq.1} < k_1$$

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where T_1 and k_1 are the time constant and the transfer coefficient of the corrected element. This expression shows that the correcting device should be a rigid parallel negative return link. The parameters of this link are found from

$$T_{eq.1} = \frac{T_1}{1 + k_1 k_c}; \quad k_{eq.1} = \frac{k_1}{1 + k_1 k_c} \quad \text{and} \tag{32}$$

$$k_c = \frac{1}{k_{eq.1}} - \frac{1}{k_1} \quad \text{or} \quad k_c = \frac{T}{T_{eq.1}} - \frac{1}{k_1} \tag{33}$$

b) Should the equivalent parameters of the corrected part of the system, as determined from (29), be

$$T_{eq.1} > T_1, \qquad k_{eq.1} > k_1, \tag{34}$$

then it will be necessary to introduce a rigid positive parallel

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return link. The expressions for $T_{eq.1}$ and $k_{eq.1}$ are similar to (32) and (33), but will have opposite signs. c) Should the equivalent parameters of the corrected link be

$$T_{eq.1} > T_1, \quad k_{eq.1} = k_1 \tag{37}$$

then, in this case, it would be necessary to introduce a flexible negative parallel return link. The parameters of an ideal flexible link are determined from $T_{eq.1} = T_1 + k_1 k_c$ (38), whence k_c could be found. d) Should the equivalent parameters of the corrected link be

$$T_{eq.1} < T_1, \quad k_{eq.1} = k_1 \tag{40}$$

then it would be necessary to introduce a positive flexible parallel return link, whose parameters are found from $T_{eq.1} = T_1 -$

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$-k_1k_c$ (41). 2) The corrected part of the system contains two series-connected unstable elements. The author assumes the equations of these elements to be

$$(T_1p + 1)X_2(p) = k_1X_1(p), \quad (T_2p + 1)X_3(p) = k_2X_2(p). \tag{43}$$

Solving these equations simultaneously gives

$$[T_1T_2p^2 + (T_1 + T_2)p + 1]X_3(p) = k_1k_2X_1(p). \tag{44}$$

Two unstable elements connected in series represent an oscillating element given by Eq. (44) which could be written in the form

$$(T_o^2p^2 + Tp + 1)X_3(p) = kX_1(p); \; T_1 \cdot T_2 = T_o^2; \; T_1 + T_2 = T; \; k_1 \cdot k_2 = k. \tag{45}$$

a) Let the equivalent parameter of the corrected part of the system as determined from (29) be given by

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$$T_{eq.o}^2 < T_o^2,$$
$$T_{eq.} < T, \qquad (46)$$
$$k_1 < k.$$

Then the equation of the oscillating element shunted by a rigid parallel link will be

$$\left(\frac{T_o^2}{1 \pm kk_c} p^2 + \frac{T}{1 \pm kk_c} p + 1\right) X_2(p) = \frac{k}{1 \pm kk_c} X_1(p) \qquad (47)$$

From (47) and (46) it follows that there should be applied a rigid parallel negative return link, the transfer coefficient being determined from one of the following relations:

$$T_{eq.o}^2 = \frac{T_o^2}{1 + kk_c}, \quad T_{eq.} = \frac{T}{1 + kkc}, \quad k_{eq.} = \frac{k}{1 + kk_c} \qquad (48)$$

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whence for the last expression of (48)

$$k_c = \frac{1}{k_{eq.}} - \frac{1}{k}. \tag{49}$$

b) When

$$T_{eq.o}^2 > T_o^2$$

$$T_{eq.} > T \tag{50}$$

$$k_{eq.} > k$$

then it would be necessary to introduce a positive rigid return link. The expressions obtained are similar to those obtained previously. c) Let the equivalent parameters, as determined in (29) be

$$T_{eq.o}^2 = T_o^2,$$

$$T_{eq.} < T \tag{53}$$

$$k_{eq.} = k.$$

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Then it follows that there should be introduced a flexible return link in shunt to the corrected oscillating element. The equation of the oscillating element is:

$$(T_o^2 p^2 + Tp + 1)X_2(p) = kX_1(p).$$

The equation of an ideal flexible link is:

$$X_3(p) = k_c p X_2(p).$$

The equation of the oscillating link, shunted by an ideal flexible return link is:

$$(T_o^2 p^2 + Tp + 1)X_2(p) = k[X_1(p) \pm k_c p X_1(p)]$$

whence $[T_o^2 p^2 + (T \mp kk_c)p + 1] X_2(p) = kX_1(p).$ (54)

Eq. (54) suggests that an ideal flexible return link in shunt of an oscillating element, does not change the structure of this element, but does change the time constant T at the first derivative,

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leaving T_o^2 and k of the oscillating element unchanged. A positive flexible return link diminished the time constant T

$$T_{eq.} = T - kk_c. \quad (55)$$

A negative flexible return link increases the time constant

$$T_{eq.} = T + kk_c. \quad (56)$$

Then for the case determined by (53) it is necessary to introduce a flexible positive parallel link, whose transfer coefficient is determined from (55). d) If the equivalent parameters are given by

$$T_{eq.o}^2 = T_o^2,$$
$$T_{eq.} > T, \quad (58)$$
$$k_{eq.} = k,$$

then it will be necessary to introduce a negative parallel flexible return link, whose transfer coefficient is determined from (56).

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On determining the structure and the parameters of the "series connected" correcting devices, the author states that if the structure and parameters of a "connected in parallel" correcting device are determined, this means that its transfer function, $W_{oc}(p)$ and the amplitude phase characteristic (a.p.c.) $W_{oc}(j\ )$ are determined. Then it will be possible to find the (a.p.c.) $W_k(j\omega)$ of a "series connected" correcting device which would regulate in a manner equivalent to a "parallel connected" device. Then the amplitude phase characteristic of a system corrected by a parallel correcting device is

$$W_c(j\omega) = \frac{W(j\omega)}{1 + W_{shu.}(j\omega) \cdot W_{oc}(j\omega)}, \qquad (60)$$

where $W(j\omega)$ = the (a.p.c.) of all elements of the system except the corrected ones, $W_{shu.}(j\omega)$ = the (a.p.c.) of the elements shunted by a "parallel connected" correcting device, $W_{oc}(j\omega)$ = the (a.p.c.)

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of the "parallel connected" correcting device. The amplitude phase of a system corrected by a "series connected" correcting device is given by $W_c(j\omega) = W(j\omega) \cdot W_k(j\omega)$ (61), where $W_k(j\omega)$ = the (a.p.c.) of the correcting device connected in series. Now

$$W(j\omega) \cdot W_k(j\omega) = \frac{W(j\omega)}{1 + W_{shu.}(j\omega) \cdot W_{oc}(j\omega)}, \qquad (62)$$

whence the (a.p.c.) of the series correcting device

$$W_k(j\omega) = \frac{1}{1 + W_{shu.}(j\omega) \cdot W_{oc}(j\omega)}. \qquad (63)$$

From this expression the structure and the parameters of a "series connected" correcting device may be determined. The introduction of an ideal derivative into the law of regulation leads to

$$W_c(j\omega) = k_a A(\omega) e^{-j\varphi(\omega)} + k_k A(\omega) e^{-j\left[\varphi(\omega) - \frac{\pi}{2}\right]}, \qquad (64)$$

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where $k_a A(\omega) e^{-j\varphi(\omega)}$ = the (a.p.c.) of a non-corrected system, k_k = transfer coefficient of a series differentiating device. Expression (64) shows that at all ω there is added to a vector $k_a A(\omega)$ $e^{-j\varphi(\omega)}$ of a non-corrected system on the same vector but rotated by $+90^\circ$, and changed to the scale by $k_k \omega$. The amplitude of vector $W(j\omega)$ and the dynamic accuracy increase with the increase of ω. The rotation of this vector in an anti-clockwise direction signifies the increase of the velocity of response and that of stability. The introduction of a series integral into the system

$$W_i(j\omega) = k_a A(\omega) e^{-j\varphi(\omega)} + \frac{k_k}{\omega} A(\omega) e^{-j\left[\varphi(\omega) + \frac{\pi}{2}\right]} \qquad (65)$$

shows that a vector is added, changed to the scale $\frac{k_k}{\omega}$ and rotated by an angle -90° (clockwise). With $\omega \to 0$, $\frac{k_k}{\omega} A(\omega) \to \infty$, that is

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the amplitude of the complementary vector increases to infinity. Also when $\omega - \infty$, $\frac{k_k}{\omega} A(\omega) \to 0$. Thus the static accuracy of the regulation is increased and the rotation of the complementary vector through -90^0 decreases the stability of the system. Finally as regards determining the transfer coefficient of a closed-loop system, the author states that it follows from the theorem of the final values that

$$\lim_{t \to \infty} x(t) = \lim_{P \to 0} pX(p) \qquad (66)$$

could be transformed into

$$\lim_{t \to \infty} x(t) = \lim_{\omega \to 0} R(\omega) \qquad (67)$$

whence $x(\infty) = R(0)$ (68), i.e. the final value of the transfer function $x(\infty)$ is equal to the initial value of the real frequency characteristic $R(0)$. However, $x(\infty)$ could be obtained in a steady

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state. From a mathematical view-point in the steady state, all the derivatives on both sides of the differential equation are zeros, i.e.

$$\frac{dx}{dt} = \frac{d^2x}{dt^2} = \ldots = \frac{d^nx}{dt^n} = 0. \quad (69)$$

In this manner the numerical value of R(0) is determined by the transfer coefficient of the closed loop system. The transfer coefficient of a designed system could be found from

$$R(K_{opt.}, 0) = R_{opt.}(0). \quad (70)$$

The transfer coefficient of the main return link is determined subsequently from $K_{opt.} = K_o b$, whence b is found. $K_o = k_1, k_2 \ldots k_n$ = the transfer coefficient of an open loop system. It is stated that examples of application of this method will be published in the future in separate articles. There are 2 figures, 1 table and 3 Soviet-bloc references. [Abstractor's note: This is

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SUBMITTED: February 24, 1960

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVASTEYEV, V.G., dotsent, kand.tekhn.nauk

Generalization on equations of static moments of mine hoists. Nauch. trudy MGI no.23:105-115 '58. (MIRA 15:12)
(Mine hoisting)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVASTEYEV, Valentin Gavrilovich; MIKHALEVSKAYA, V.I., red. izd-va; YEZHOVA, L.L., tekhn. red.

[Frequency method for analyzing the quality of control processes] Chastotnyi metod analiza kachestva protsessov regulirovaniia; lektsiia po distsipline "Avtomaticheskoe regulirovanie" dlia studentov elektrofizicheskogo fakul'teta spetsial'nosti - Avtomaticheskie izmeritel'nye ustroistva i pribory i dlia studentov energeticheskogo fakul'teta spetsial'nosti - Elektrooborudovanie promyshlennykh predpriiatii. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 45 p. (MIRA 16:9)
(Automatic control)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVASTEYEV, V.G., kand. tekhn. nauk, dotsent

Synthesis of correcting elements in the optimalizing automatic control system of a skip hoist. Elektrichestvo no.12:1-7 D '53. (MIRA 17:1)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVASTEYEV, Valentin Gavrilovich, kand.tekhn.nauk, dotsent

Synthesis of the corrective devices of reversive automatic control systems. Izv. vys. ucheb. zav.; elektromekh. 6 no.6:730-742 '63. (MIRA 16:9)

1. Kafedra avtomaticheskikh, izmeritel'nykh ustroystv i priborov Vsesoyuznogo zaochnogo politekhnicheskogo instituta.
(Automatic control)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVALIYEV, Valentin Savrilovich, kand.tekhn.nauk, dotsent

Construction of optimum amplitude-phase and logarithmic frequency characteristics with a given transient process. Izv.vys.ucheb.zav.; elektromekh. 8 no.3:324-331 '65.

(MIRA 18:5)

1. Kafedra avtomaticheskikh izmeritel'nykh ustroystv i priborov Vsesoyuznogo zaochnogo politekhnicheskogo instituta.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

BERLOVICH, E.Ye.; KHAY, D.M.; SAVATEYEV, A.V.

Forbidden β-spectr of Rb^{86}, Sr^{90}, Y^{90} and Tl^{204}. Izv.AN SSSR. Ser.fiz. 20 no.3:275-288 Mr '56. (MLRA 9:8)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR.
(Isotopes--Spectra)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

S/115/60/000/05/13/034
B007/B011

AUTHORS: Brodskiy, A. D., Savateyev, A. V.

TITLE: A New Method of Measuring Absolute Temperature

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 5, pp. 21-25

TEXT: A new method of temperature measuring is described here. It is based on the amplitude discrimination and on the calculation of the number of voltage pulses of thermal noise which depends on the absolute temperature of the resistor. A relation is derived between the absolute temperature and the number of pulses per unit time with known threshold of the discrimination. The method shown here allows, in principle, for temperature to be measured in a wide range. Theoretically, the sensitivity of this method rises with dropping temperature. The paper under review is a provisional communication on the possibility of using the method under discussion for the measurement of thermodynamic temperature, and contains no estimation of the respective accuracy. There are 4 figures and 7 references: 2 Soviet, 4 English and 1 German.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVATEYEV, K.G.

Grinding disk spirals of lathe chucks. Stan.i instr. 32 no.3:38-39 Mr '61. (MIRA 14:3)

(Grinding and polishing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

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E073/E535

24.5600 (1482, 1537, 1137)

AUTHORS: Brodskiy, A.D., Kremlevskiy, V.P., Savateyev, A.V.

TITLE: New methods of realizing the thermodynamic scale in the range of low temperatures

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, 1961, No.6, pp.3-4, abstract 6G23. (Tr. in-tov Kom-ta standartov mer i izmerit. priborov pri Sov. Min. SSSR, 1960, Issue 49, (109), 24-29)

TEXT: The paper deals with work on realizing a thermodynamic scale at low temperatures by the method of an electroacoustic gas thermometer and the method of counting thermal noise voltage pulses. Realization of the thermodynamic temperature scale by means of the electroacoustic gas thermometer is based on the dependence of the temperature of the resonant frequency of the oscillations of the sound wave in an acoustic tubular resonator. The realization by means of a thermal noise thermometer is based on the temperature dependence of the number of noise voltage pulses, the amplitude of which exceeds a given discrimination threshold. In the applied methods, measurement of the temperature is realized by means of

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frequency measuring instruments, as a result of which a high sensitivity is achieved which increases with decreasing temperature. Basic circuits are given for both systems and also the results of measuring the boiling temperature of hydrogen and oxygen. It is pointed out that although the obtained results are in good agreement with the data of the international temperature scale, they are preliminary, since the influence of systematic errors on the measured results has not been adequately studied. Work is continuing on improving the accuracy of the thermodynamic temperature scale in the range 4-273°K by means of the electroacoustic gas thermometer and the thermal noise thermometer methods and work is also continuing on stabilizing the temperature field and excluding systematic errors. 3 references.
Abstracted by L. Boronina.

[Abstractor's Note: Complete translation.]

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

S/115/62/000/002/003/009
E032/E414

AUTHOR: Savateyev, A.V.

TITLE: A compensated pulse thermal-noise thermometer

PERIODICAL: Izmeritel'naya tekhnika, no.2, 1962, 19-24

TEXT: In a previous paper A.D.Brodskiy and the present author (Ref.6: Izmeritel'naya tekhnika, no.5, 1960) described a new method of using Johnson noise to measure low temperatures (below 0°C). A particular feature of this method is that the required temperature is determined from the number of noise pulses exceeding a certain preset threshold amplitude. A disadvantage of the thermometer described in Ref.6 was the fact that the accuracy with which the temperature could be measured depended on the stability of the associated apparatus, e.g. constancy of the amplification coefficient of the amplifier and of the threshold of the amplitude discriminator. In the present paper the author describes two versions of the thermometer which are largely free from this disadvantage. In addition, an experimental verification is reported of the fact that the sensitivity of the method increases with decreasing temperature. A formula is

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derived for the sensitivity threshold of the thermometer. This formula has been verified by the author in the region of 90°K. Various methods are suggested whereby the accuracy of the measurements may be increased. It is shown that the smallest temperature change which can be detected is of the order of 0.1° at about 90°K. A detailed analysis of the errors involved is given. I.A.Khvostunova participated in the tests. There are 4 figures, 1 table and 10 references: 5 Soviet-bloc and 5 non-Soviet-bloc. The references to English language publications read as follows: Ref.1: Harrison I.B., Lawson A.W. Rev. Sci. Instr., 1949, 20, no.11, 785; Ref.4: Patronis E.I. et al, Rev. Sci. Instr., 1959, 30, no.7, 578; Ref.5: Fink H.J. Canad. J. Phys., 1959, 37, no.12, 1397.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

BRODSKIY, A.D.; KREMLEVSKIY, V.P.; SAVATEYEV, A.V.

New methods for establishing a thermodynamic low-temperature scale. Izm.tekh. no.9:35-36 S '62. (MIRA 15:11)
(Thermometry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

BRODSKIY, A.D.; KREMLEVSKIY, V.P.; SAVATEYEV, A.V.

New methods for establishing a thermodynamic scale in the range of low temperatures. Trudy inst.KOM.Stand., mer i izm.prib. no.49:24-29 '60. (MIRA 15:12)

(Low temperature research)
(Thermometry)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

BRODSKIY, A. D.; SAVATEYEV, A. V.

Pulse noise thermometer. Trudy inst. Kom. stand., mer i izm. prib. no.51:110-115 '61. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva.

(Thermometers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVATEYEV, A. V.

Selecting conditions for maximum sensitivity of a pulse thermal noise thermometer and a possible method for determining its constants. Trudy inst. Kom. stand., mer i izm. prib. no.51: 116-130 '61. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva.

(Thermometers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVATEYEV, K. N., Cand Med Sci (diss) -- "The management of pregnancy and birth in placental presentation". Minsk, 1959. 21 pp (Minsk State Med Inst), 200 copies (KL, No 10, 1960, 137)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

MOSKVIN, Ivan Aleksandrovich; SAVATEYEV, M.I., red.; KHARASH, G.A., tekhn.red.

[Tick-borne spirochetosis] Kleshchevye spirokhetozy. Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd-nie, 1960. 162 p. (MIRA 14:3)

(SPIROCHETOSIS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVATEYEV, L. A., Cand Tech Sci -- "Dynamics of the mobile parts of electric measuring instruments with ~~the strengthening of tension members~~ tensile strength," Len, 1961. (Min of Higher and Sec Spec Ed RSFSR. Leningrad Inst of ~~Ref~~ Precision Mech and Optics) (KL, 8-61, 248)

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SAVATEYEV, N.V.

Antagonistic action of cholinolytic and anticholinesterase compounds on the activity of the higher nervous system in man and animals. M. Ya. Mikhel'son, P. K. Rozhkova, and N. V. Savateev (I. P. Pavlov Inst. Med. Inst., Leningrad). Byull. Eksper. Biol. i Med. 37, No. 3, 12(1954). — In dogs with preestablished conditioned reflexes, intramuscular injection of 1–5 mg. per kg. of pentaphen (Purpanit) abolished the conditioned reflexes. Simultaneous injection of 0.03 mg. per kg. of prophysostigmine (proserine) abolished the effects of pentaphen and the conditioned reflexes were normal. In white rats, atropine or scopolamine (1 to 5 mg. per kg.) also seriously interfered with preestablished conditioned reflexes, and prophysostigmine prevented the interference by either atropine or scopolamine. Intramuscular injection of 3 to 5 mg. per kg. of pentaphen in man induced serious psychic disturbances which were prevented by the simultaneous administration of prophysostigmine (0.02 mg. per kg.). The fact that atropine-like compds. can compete with acetylcholine in choline-accepting systems, inducing alterations in psychic activity, indicates importance of these systems in the functions of the brain. Physostigmine and prophysostigmine prevent the destruction of acetylcholine and thereby increase its effects. The importance of cholinergic systems in the function of the brain is thus indicated. J. A. S.

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V-5

USSR/Pharmacology and Toxicology. Cholinergics

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47190

Author : Mikhel'son M.Ya., Savateyev N.V., Lukonskaya N.Ya., Rozhkova Ye.K., Grigor'yeva L.M.

Inst : AS USSR

Title : The Effect of Anticholinesterase (Phospho-organic and other), the Parasympathomimetic and Parasympatholytic Substances Upon the Higher Nervous Activity of Man and Animals

Orig Pub : V. sb.: Khimiya i primeneniye fosfororgan. soyedineniy. M., AN SSSR, 1957, 324-334. Diskus. 334-335

Abstract : The subcutaneous introduction of 3-4 mg/kg. of Pentaphene (I) to healthy persons produces weakly marked disturbances of the higher nervous activity during 2-3 hours, while the administration of 5 and 10 mg/kg. disturbs the consciousness completely for a period of 2-5 hours. In the simultaneous administration of I (3.0-3.5 mg/kg.) and of Proserin [Neostigmine methylOsulfate, Prostigmine methyl-

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1. SAVATEYEV, V.B.

2. USSR (600)

4. Cirripedia

7. Physiology of the adjustment of acorn barnacles (Balanus Balanoides) to variations of salinity. Zool.zhr. 31 no.6. 1952

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

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

DIMITROV, Kh.; SIMOVA, P.; PETSEV, N.; BEZUKHANOVA, TS.; SAVATINOVA, I.

Chemical composition of the Dolni Dubnik petroleum. Doklady BAN 17 no.3:255-258 '64.

1. Chair of Organic Chemistry, University of Sofia, and Institute of Physics and Atomic Scientific Experiment Station, Bulgarian Academy of Sciences. Submitted by Academician D.Ivanov.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

L 07229-67 EWP(j) RM/WE

ACC NR: AT6023983 (A) SOURCE CODE: BU/2509/63/058/000/0063/0076

AUTHOR: Dimitrov, Khr.; Georgiev, M. - Georgiyev, M.; Savatinova, Iv.

ORG: Department of Organic Chemistry, Chemistry Faculty, Sofia University (Katedra po organichna khimiya, Khimicheski fakultet, Sofiyski Universitet)

TITLE: Chemical composition of naphtha obtained by coking of topped residue from naphthenic-aromatic Tyulenovo crude. 7. Individual and group composition of aromatic and naphthenic-paraffinic hydrocarbons in the 150—200C fraction

SOURCE: Sofia. Universitet. Khimicheski fakultet. Godishnik, v. 58, 1963/1964. Sofia, 1965, 63-76

TOPIC TAGS: aromatic hydrocarbon, olefin, chemical composition, naphtha, paraffin

ABSTRACT: A combination method was used for the tentative group analysis and qualitative determination of individual hydrocarbons in a 150—200C cut of coking naphtha from Bulgarian crude; the method comprised chromatographic separation, rectification, gas chromatography, catalytic dehydrogenation, spectroscopy, and measurements of physical and chemical parameters. The presence of 36.8% naphthenic-paraffinic hydrocarbons, 38.2% olefins, and of 25% aromatics was shown. Qualitative analysis showed measurable and trace amounts of 18 and 11 aromatic and 15 and 9 cyclohexane derivatives, respectively. Relatively larger amounts of 1-methyl-3-ethylbenzene, 1,2,4- and 1,2,3-trimethylbenzene, indane, n-butylbenzene, 1,2 -dimethyl-4-ethylbenzene, 1,2,4,5-tetramethylbenzene, and naphthalene were indicated by the intensity of spectroscopic

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L 07229-67

ACC NR: AT6023983

lines. Narrow fractions were obtained and coordinated with the distribution of paraffinic-cylopentane derivatives. Orig. art. has: 7 tables and 5 figures.

SUB CODE: 07/ SUBM DATE: 18Dec64/ ORIG REF: 001/ OTH REF: 001/ SOV REF: 012

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVATTI, M.

SURNAME, Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: -not given-

Source: Bucharest, Comunicarile Academiei Republicii Populare Romine, Vol XI No 12, 1961, pp 1509-1513.

Data: "The Action of Some Oligo-Elements on the Seed Production of Red Clover."

Authors:

~~MIRON, Gh.~~
SAVATTI, M.
BUDA, L.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

MIRON, Gh; SAVATTI, M.; BUDA, L.

Action of certain microelements on the production of red clover seed. Comunicarile AR 11 no.12:1509-1513 D '61.

1. Comunicare prezentata de Amilcar Vasiliu, membru corespondent al Academiei R.P.R.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

GOLUBCHIK, A.A.; SERGUNIN, K.G.; SAFRONOV, V.S.; KOROTYA, M.Ye.; GOL'DENBERG, S.Z.; SAVAT'YEV, M.I.; BANSHCHIKOV, N.P.

Unit for making 160mm multihollow reinforced concrete slabs. suggested by A.A.Golubchik, K.G.Sergunin, V.S. Safronov, M.K.Korotia, S.Z.Gol'denberg, M.I.Savat'iev, N.P.Banshchikov. Rats.i izobr. predl.v stroi. no.13:9-11 '59. (MIRA 13:6)

1. Po materialam Fryazinskogo stroitel'no-montazhnogo upravleniya stroitel'nogo tresta No.27 Mytishchistroy Glavmosoblstroya.
(Concrete slabs)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

POLYANCHEVA, A. P., SAVATYUGINA, S. M.

Infrared Rays - Industrial Applications

Determination of moisture in peat with the aid of infra-red radiation. Torf. prom., 29, no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1958. Unclassified.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVAY, GY., CSILLIK, B., BONDRAY, O.

"Unspecified esterase activity of the sensorial and vegetative ganglions" p. 207.
(ACTA MORPHOLOGICA ACADEMIAE SCIENTIARUM HUNGARICAE, Vol. 3, no. 2, 1953, Budapest.)

SO: Monthly List of East European Accessions, Library of Congress, Vol 2, no. 10, Oct. 1953, Uncl.

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SAVAY, G.; CSILLIK, B.; GELLERT, A.

Data on chromophil cells of the spinal ganglia. Kiserlates Orvostud. 3 no. 5:329-333 1951. (CLML 21:3)

1. Doctors. 2. Institute of Anatomy, Histology and Embryology, Szeged Medical University.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVAY, GYULA Hungary CA: 47:12432

with BERTALAN CSILLIK and OTTILIA BONDRAY

Med. Univ., Szeged

"The unspecific esterase activity of sensory and vegetative ganglia."

Acta Morphol. Acad. Sci. Hung. 3, 207-15 (1953) (in German).

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SAVAY, GY.

Savay, Gy.; Csillik, B.; Gellert, A.

"The Experimental Effect of Cold on the Rise of Blood Pressure." p. 64. (Acta Physiologica. Supplement to v. 4, 1953, Budapest)

SO: Monthly List of East European Accessions. Vol 3 No 6 Library of Congress, Jun 54, Uncl.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVAY, G.; CSILLIK, B.

Effect of non-specific esterase on autonomic and sensory ganglia. Kiserletes orvostud. 5 no.2:81-86 Mar 1953. (CLML 24:4)

1. Institute of Anatomy, Histology, Embryology of Szeged Medical University.

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SAVAY, GY.

The histochemistry of cholinesterase activity in the nervous system. 3. Cellik and Gy. Savay (Med. Univ. Szeged). *Acta Morphol. Acad. Sci. Hung.* 4, 103-9(1954) (in English).—In using a modified Nachlas-Seligman (*C.A.* 43, 6678f) naphthyl acetate technique, stable cholinesterase (I) was localized in the cytoplasm of autonomic and sensory ganglion cells, in postganglionic fibers, in motor end plates, and in tactile corpuscles. Labile I was localized in the larger sensory ganglion cells, peripheral myelin sheaths, and in the intercellular substance of the gray matter. Glial, Schwann, and connective tissue cells gave neg. reactions.

John F. Lhotka

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SAVAY, G.

5

5089. Cholinesterase activity of sensory nerve endings. B. Csillik, G. Sávay, I. Nagy, O. Bondray and M. Poberay *Acta physiol. Acad. Sci. hung.*, 1954, 6, 379—384 (Inst. Anat. Histol. and Embryol., Med. Univ., Szeged, Hungary).—A histochemical study. The deparaffined 15 μ. sections are incubated in a buffered solution (pH 7·4) of β-naphthyl acetate and diazotid α-naphthyl amine for 30 min. Cholinesterase is stained purple red. Eserine 10^{-5} inhibits cholinesterase staining but not staining of other esterases. The pad of the paw of normal rats and in those with transected nervus ischiadicus on one side were examined. The tactile corpuscles were shown to contain cholinesterase. The esterolytic activity of these receptors persisted up to 28 days after sciatic sectioning, although the nerve fibres degenerated completely. It is concluded that the skin receptors have an enzymic structure similar to that of the motor end-plate forming synapses between "pre-synaptic membrane" and telodendrion. A. B. L. BEZNÁK.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

PINTER, Imre; SAVAY, Gyula; CSILLEK, Bertalan

A new method for detection of protein fractions separated by paper electrophoresis. Kiserletes orvostud. 6 no.6:513-515 Nov 54.

1. Szegedi Orvostudomanyi Egyetem II. sz. Balklinikaja es Anatomiai Szovet-es Fejlodestani Intezete.

(ESTERASES, in blood
electrophoresis)
(ELECTROPHORESIS
of esterase in blood)
(BLOOD
esterase, electrophoresis)

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SNVA 4, 24

96. Denervation and cholinesterase activity of the motor end-plate. Gy. Sávay and B. Csillik *Acta morph. hung.*, 1956, 6, 289—297 (Dept. of Anatomy, Med. Univ., Szeged, Hungary).—The cholinesterase activity of the myoneuronal junction was found to persist for several months after denervation. A histochemical method, employing lipoid-soluble substrates, was used to measure enzyme activity in nervous structures. The biochemical changes in the course of degeneration have been followed. O. GREENGARD

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2.

Med

81. Microscopical localisation of potassium in myelinated nerve fibres. G. Savay and B. Csillik *Acta physiol. Acad. Sci. Hung.* 1956, 9, Suppl. 16—17 (Anat. Inst. Med. Univ. Szeged, Hungary). The greatest part of intra-cellular K was found with histochemical methods to be in the region of the Ranvier nodes of fibres of nucleus ischiadicus of frogs and mammals. Raising O_2 tension causes K to move to the internodium. When the nerve is cooled below 0° K diffuses into the interstitium. In *in vivo* experiments 2 hr rewarming is enough for the nerve to regain its normal K position. (German) A. B. L. Brenner

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SAVAY, Gyula

CSILLIK, Bertalan; SAVAY, Gyula

Microscopic localization of potassium in myelinated nerve fibers. Orvosi Hetilap 9 no.2:151-158 Apr 57.

1. Szegedi Orvostudomanyi Egyetem Bonctani, valamint Szovet- es Fejlodestani Intezete.

(NEURONS, metab.
potassium, microscopic localization in myelinated nerve fibers (Hun))
(POTASSIUM, determ.
in myelinated nerve fibers, microscopic localization (Hun))

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SAVAY, Gy.; CSILLIK, B.

Effects of enzyme inhibiting agents on the potassium content of Ranvier's nodes. Acta physiol. hung. 11(Suppl):71-72 1957.

1. Anatomisches Institut der Medizinischen Universitat, Szeged.
(ENZYMES, antag.
enzyme poisons, eff. on potassium content of Ranvier's nodes (Ger))
(NERVES, eff. of drugs on
enzyme poisons, on potassium content of Ranvier's nodes (Ger))
(POTASSIUM, metab.
Ranvier's nodes, eff. of enzyme poisons on content (Ger))

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CSILLIK, B.; JOO, F.; JUHASZ, K.; KALMAN, Gy; KASA, P.; SAVAY, Gy.

On the effect of denervation on the submicroscopic structure of the postsynaptic membrane in the myoneural junction. Acta morph. acad. sci. Hung. 12 no.2:211-226 '63.

1. Anatomisch-Histologisches Institut (Vorstand: Prof. Dr. A. Gellert) der Medizinischen Universitat Szeged.
(MYONEURAL JUNCTION) (SCIATIC NERVE)
(SYNAPSES) (NERVE ENDINGS)
(ACETYLCHOLINE) (CHOLINESTERASE)
(HISTOCHEMISTRY) (MICROSCOPY)

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CSILLIK, B.; SAVAY, G.

The effect of nerve degeneration and regeneration on the calcium-release in the post-junctional cytoplasm of the motor end-plate. Acta physiol. acad. sci. Hung. 26 no.4: 337-342 '65

1. Department of Pharmacology, University of Pennsylvania, Philadelphia, Pa, U.S.A. and Department of Anatomy, University Medical School, Szeged, Hungary.

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SAVCHAK, Yekaterina Mikhaylovna

[13.5 centners of flax per hectare] 13,5 tsentnera lonovolokna z hektara. Lviv, knyzhkovo-zhurnalne vyd-vo, 1956. 19 p.
(MIRA 11:10)

(Flax)

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NIKOLAYEVSKIY, I., inzh.; GUTKIN, V., inzh.; SAVCHENKO, A., inzh.

Resistance of the base circuit. Radio no.7:41-45 Jl '63.
(MIRA 16:7)

(Transistors)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SMIRNOV, N.; SAVCHENKO, A., inzh.; OVECHKIN, Yu., inzh.

Special features in the use of transistors. Radio no.2:53-56 F '65. (MIRA 18:4)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

GORYUNOV, N., kand. fiz.-matem. nauk; SAVCHENKO, A., inzh.;
OVECHKIN, Yu., inzh.

Features of using transistor devices. Radio no.3:40-41 Mr '65.
(MIRA 18:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

GORYUNOV, N., kand.fiz.-matem.nauk; SAVCHENKO, A., inzh.; OVECHKIN, Yu., inzh.

Special operational features of transistor devices. Radio no.6:54-55 Je '65. (MIRA 18:10)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

GORYUNOV, N., kand.fiz.-matem.nauk; OVECHKIN, Yu., inzh.; SAVCHENKO, A., inzh.

Special features of the use of transistor devices. Radio no.4:44-46 Ap '65. (MIRA 18:5)

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GORYUNOV, N., kand. fiz.-matem. nauk; OVECHKIN, Yu., inzh.; SAVCHENKO, A., inzh.

Operational characteristics of transistor devices. Radio no.5:55-56 My '65. (MIRA 18:5)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

SAVCHENKO, A., inzh.-kapitan, kand. tekhn. nauk; GIMRANOVA, F., kand. khim. nauk

Heat protection of space vehicles. Av. i kosm. 47 no.3:30-33 Mr '65. (MIRA 18:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

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Savchenko, A.A.

USSR.

Experiment on the Pouring of Steel. A. A. Savchenko. (*Litinoe Proizvodstvo*, 1954, (2), 27). [In Russian]. Ladle stoppers and procedure for facilitating the pouring of steel in the foundry are briefly described.—S. K.

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SAVCHENKO, A.A.

Study on contact thermometers. Trudy Inst. fiz. Zem. no. 29: 134-141 '63. (MIRA 17:6)

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SAVCHENKO, A. A.

Coal Mines and Mining

Tasks in the further development of open-cut mining of coal. Ugol', No. 1, 1952.

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

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SAVCHENKO, A., A.

SAVCHENKO, A., inzhener.

In open coal pits of the German Democratic Republic. Mast. ugl. 6 no.7:28-31 Jl '57. (MLRA 10:9)
(Germany, East--Strip mining)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

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SAVCHENKO, Appolon Andreyevich; MEL'NIKOV, N.V., otv.red.; KAUFMAN, A.M., red.izd-va; KONDRAT'YEVA, N.A., tekhn.red.

[New trends in the expansion of open-pit mining in the U.S.S.R.] O novykh napravleniiakh v razvitii otkrytykh razrabotok v SSSR. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 76 p. (MIRA 13:1)

(Strip mining)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

A.

SAVCHENKO, A. (g. Chistyakovo, Stalinskoy obl.)

In the club of a progressive mine. Sov. profsoiuzy 7 no.6:55 Mr '59. (MIRA 12:6)

(Chistyakovo--Miners)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447310009-2

KHRUSHCHEV, N.S.; PODGORNYY, N.V.; ZASYAD'KO, A.F.; RUDAKOV, A.P.; KAZANETS, I.P.; SHILIN, A.A.; MEL'NIKOV, N.V.; BURMISTROV, A.A.; SHEVCHENKO, V.V.; MAYAKOV, L.I.; ROZENKO, P.A.; KUZ'MICH, A.S.; ZADEMIDKO, A.N.; BRATCHENKO, B.F.; STRUYEV, A.I.; KRASNIKOVSKIY, G.V.; BOYKO, A.A.; KAGAN, F.Ya.; USKOV, A.A.; VLADYCHENKO, I.M.; TOPCHIYEV, A.V.; DEGTYAREV, V.I.; KHUDOSOVTSEV, N.M.; GRAFOV, L.Ye.; IVANOV, V.A.; KRATENKO, I.M.; GOLUB, A.D.; IVONIN, I.P.; SAVCHENKO, A.A.; ROZHCHENKO, Ye.N.; CHERNEGOV, A.S.; MARKELOV, M.N.; LALAYANTS, A.M.; GAPONENKO, F.T.; POLUEKTOV, I.A.; SKLYAR, D.S.; PONOMARENKO, N.F.; POTAPOV, A.I.; POLYAKOV, N.V.; SUBBOTIN, A.A.; POLSTYANOY, G.N.; TRUKHIN, P.M.; TKACHENKO, A.G.; OSTROVSKIY, S.B.; NYRTSEV, M.P.; DYADYK, I.I.; SHPAN'KO, T.P.; RUBCHENKO, V.P.

Kondrat Ivanovich Pochenkov; obituary. Sov. shakht. 11 no.9: 48 S '62. (MIRA 15:9)

(Pochenkov, Kondrat Ivanovich, 1905-1962)

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SAVCHENKO, A.A.

Pechora coal basin mines struggle to put into practice the decisions of the 22d Congress of the CPSU. Ugol' 37 no.9:5-8 S '62. (MIRA 15:9)

1. Predsedatel' Soveta narodnogo khozyaystva Komi ASSR.

(Pechora Basin--Coal mines and mining)

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