and solve for L_K and K, but in practice this method is difficult and inexact, mainly because the large saturation fluxes Ψ_1 and Ψ_2 have only slightly different values. The proposed method avoids these difficulties. The basic theory of the method is as follows: the function

$$\gamma = |\sin^K x| \qquad (4)$$

is Fourier analysed and the values of the constant component $a_0/2$ and of the second harmonic a_2 are found from tables (Ref 4). Then the reciprocal value $1/K$ of the non-linearity index is found from the formula

$$\frac{1}{K} = \left|\frac{a_0}{2a_2}\right| - \frac{1}{2} \qquad (5)$$

The block diagram of a circuit which will perform these operations is shown in Fig 1. A sinusoidal current, sufficient to cause saturation, is passed through the non-linear winding L_K. The secondary voltage is applied to an integrator, 3, at the output of which is obtained a voltage proportional to the integral of the input voltage, i.e. to the flux linkages Ψ where

Measurement of the Parameters of Non-Linear Elements

$$\Psi = L_K i^K = L_K I_m^K \sin^K \omega t$$

This voltage is applied to a double half-wave rectifier, 4, at the output of which a voltage proportional to $|\sin^K \omega t|$ is obtained. To obtain the ratio of the constant component to the second harmonic, the value of the rectified voltage is changed by a potentiometer, 5, until the amplitude of the second harmonic equals unity. A filter, 6, tuned to the second harmonic and a voltmeter, 7, are used for this purpose. When $a_2 = 1$, the value of the constant voltage measured on the voltmeter, 8, is numerically equal to the modulus of the ratio of the constant component to the second harmonic $|a_o/2a_2|$. The voltmeter scale is calibrated to conform to Eq (5) giving K direct. To find L_K, some particular amplitude of current I_m = N amps is set in the primary circuit (measured on ammeter, 10), then

$$L_K = \frac{\Psi_{max}}{I_{max}^K} = \frac{\Psi_{max}}{N^K} \qquad (6)$$

Measurement of the Parameters of Non-Linear Elements

Potentiometer, 11, has a number of scales equal to the number of selected values of I_m. The scales are directly calibrated in values of the non-linearity index K, so that the transfer coefficient of the potentiometer equals $1/N^K$. The potentiometer slider is placed at the measured value of K on the scale corresponding to the current strength. Then the voltmeter, 12, reads the value of L_K.

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V.P. Savel'yev and G.V. Rodionov participated in the development of a laboratory model.

There are 1 figure and 4 Soviet references.

SUBMITTED: January 26, 1959

9.8000

77178
SOV/108-15-1-4/13

AUTHOR: Gorbovich, I. T.

TITLE: Influence of Frequency- and Amplitude-Modulated Oscillations on Linear Systems

PERIODICAL: Radiotekhnika, 1960, Vol 15, Nr 1, pp 30-34 (USSR)

ABSTRACT: The problem of influence of a nonmodulated harmonic oscillation on a linear system is solved in an elementary manner by defining the output oscillation as a product of the input oscillation by a static transmission coefficient, depending only on the frequency of the impulse voltage.. In case of non-harmonic oscillations, when frequency and amplitude vary with the time, the spectrum method or the method of Duhamel integral must be used. These methods are rather complex. The paper suggests a method using a dynamic transmission coefficient which may be applied in case of quasi-harmonic input oscillations, i.e., when the frequency and amplitude vary

Card 1/6

...luence of Frequency- and Amplitude-
Modulated Oscillations on Linear Systems

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SOV/108-15-1-4/13

relatively slowly. Similarly to the static transmission coefficient K, the dynamic transmission coefficient K_d is the ratio of the output voltage ... to the input voltage U_1. U_1 is given in the complex form:

$$U_1(t) = A(t)e^{j\varphi(t)} = A(t)e^{j\int\omega(t)dt} \quad \text{for } t>0$$

$$U_1(t) = 0 \quad \text{for } t<0.$$

where $A(t)$ is the instantaneous amplitude, $\varphi(t)$ is the instantaneous phase, and $\omega(t) = d\varphi(t)/dt$ is the instantaneous frequency. The output voltage $U_2(t)$ is given as a Duhamel integral:

$$U_2(t) = \int_0^t U_1(t-\tau)g(\tau)d\tau.$$

where $g(\tau)$ is the impulse reaction of the system. It is shown that the integral limits may be changed to from ∞ to $-\infty$. The expression for U_2

Card 2/6

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-0051

77178
SOV/108-15-1-4/13

9.8000

AUTHOR: Turbovich, I. T.

TITLE: Influence of Frequency- and Amplitude-Modulated Oscillations on Linear Systems

PERIODICAL: Radiotekhnika, 1960, Vol 15, Nr 1, pp 30-34 (USSR)

ABSTRACT: The problem of influence of a nonmodulated harmonic oscillation on a linear system is solved in an elementary manner by defining the output oscillation as a product of the input oscillation by a static transmission coefficient, depending only on the frequency of the impulse voltage.. In case of non-harmonic oscillations, when frequency and amplitude vary with the time, the spectrum method or the method of Duhamel integral must be used. These methods are rather complex. The paper suggests a method using a dynamic transmission coefficient which may be applied in case of quasi-harmonic input oscillations, i.e., when the frequency and amplitude vary

Card 1/6

relatively slowly. Similarly to the static transmission coefficient K, the dynamic transmission coefficient K_d is the ratio of the output voltage U_2 to the input voltage U_1. U_1 is given in the complex form:

$$U_1(t) = A(t)e^{i\varphi(t)} = A(t)e^{i\int_0^t \omega(t)\,dt} \quad \text{for } t>0$$
$$U_1(t) = 0 \quad \text{for } t<0.$$

where A(t) is the instantaneous amplitude, $\varphi(t)$ is the instantaneous phase, and $\omega(t) = d\varphi(t)/dt$ is the instantaneous frequency. The output voltage $U_2(t)$ is given as a Duhamel integral:

$$U_2(t) = \int_0^t U_1(t-\tau)\,g(\tau)\,d\tau.$$

where $g(\tau)$ is the impulse reaction of the system. It is shown that that the integral limits may be changed to from ∞ to $-\infty$. The expression for U_2

Card 2/6

is further transformed by introducing a variable $v(t, \tau)$ which is defined as:

$$\dot{v}(t, \tau) = \frac{U_1(t-\tau)}{U_1(t)} e^{j\omega\tau} = \frac{A(t-\tau)}{A(t)} e^{j[\varphi(t-\tau) - \varphi(t) + \omega\tau]} \quad (1)$$

The function $v(t, \tau)$ accounts for the variations of A and ω. When A = const and ω = const, $v(t, \tau) = 1$. After substituting $v(t, \tau)$ into the equation for U_2, the following exact expression for K_d is obtained:

$$K_d = \frac{U_2}{U_1} = \int_{-\infty}^{\infty} g(\tau) e^{-j\omega\tau} v(t, \tau) d\tau. \quad 2)$$

When $v(t, \tau) = 1$, the known expression for the static complex transmission coefficient K may be derived as:

$$K = \int_{-\infty}^{\infty} g(\tau) e^{-j\omega\tau} d\tau. \quad (3)$$

Card 3/6

Influence of Frequency- and Amplitude Modulated Oscillations on Linear Systems

Applying Maclaurin series expansion to function $v(t, T)$, an expression more suitable for computation is obtained for K_d:

$$K_d = K + \sum_{n=1}^{m} \frac{(-1)^n}{n!} \alpha_n \frac{d^n K}{d\omega^n} + R_m \qquad (5)$$

The coefficient α_n is defined by Eq. (4), and R_m is given by Eq. (6), where $0 < \theta < 1$.

$$\alpha_n = \frac{\partial^n v(t, 0)}{\partial \tau^n} . \qquad (4)$$

$$R_m = \int_{-\infty}^{\infty} \frac{\tau^{m+1}}{(m+1)!} \frac{\partial^{m+1} v(t, \theta)}{\partial \tau^{m+1}} g(\tau) e^{-j\omega\tau} d\tau . \qquad (6)$$

Expressions for $\alpha_1, \ldots, \alpha_5$ are given in a table, where the time derivatives of A(t) and $\omega(t)$ are designated by superscript points.

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Frequency and amplitude modulation

		Amplitude modulation $\Lambda \neq$ const	Frequency modulation $\omega =$ const
a_1	$-\frac{\dot{\Lambda}}{\Lambda}$	0	$-\frac{\dot{\Lambda}}{\Lambda}$
a_2	$\frac{\ddot{\Lambda}}{\Lambda}+i\dot{\omega}$	$i\dot{\omega}$	$\frac{\ddot{\Lambda}}{\Lambda}$
a_3	$-\left(\frac{\dddot{\Lambda}}{\Lambda}+i\ddot{\omega}+3i\dot{\omega}\frac{\dot{\Lambda}}{\Lambda}\right)$	$-i\ddot{\omega}$	$-\frac{\dddot{\Lambda}}{\Lambda}$
a_4	$\frac{\Lambda^{(IV)}}{\Lambda}+i\dddot{\omega}-3\dot{\omega}^2+4i\frac{\dot{\Lambda}}{\Lambda}\ddot{\omega}+6i\frac{\ddot{\Lambda}}{\Lambda}\dot{\omega}$	$i\dddot{\omega}-3\dot{\omega}^2$	$\frac{\Lambda^{(IV)}}{\Lambda}$
a_5	$-\left(\frac{\Lambda^{(V)}}{\Lambda}+i\omega^{(IV)}+10\ddot{\omega}\dot{\omega}+5i\frac{\dot{\Lambda}}{\Lambda}\dddot{\omega}-15\frac{\Lambda}{\Lambda}\dot{\omega}^2+20i\frac{\ddot{\Lambda}}{\Lambda}\dot{\omega}+20i\frac{\dot{\Lambda}}{\Lambda}\ddot{\omega}\right)$	$-i\omega^{(IV)}+10\ddot{\omega}\dot{\omega}$	$-\frac{\Lambda^{(V)}}{\Lambda}$

Card 5/6

Influence of Frequency- and Amplitude Modulated Oscillations on Linear Systems

77178
SOV/108-15-1-4/13

If the spectrum of the functions A(t) and $\omega(t)$ is narrow in comparison with the width of the passband of the system, then only 2 to 4 terms of the series expansion may be considered. The error which this would introduce may be determined evaluating the R_m member of the series. In an appendix the coefficient K_d is derived for an amplitude-modulated signal. The modulation follows a harmonic law. A. A. Kharkevich, Corresponding Member of the Academy of Sciences, USSR, examined the manuscript of this study. There is 1 table; and 4 Soviet references.

SUBMITTED: June 19, 1959

Card 6/6

TURBOVICH, Iosif Timofeyevich; KHARKEVICH, A.A., otv. red.; MEL'NIKOVSKAYA, N.D., red. izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Method of proximity systems and its use in radio engineering for establishing procedures in designing linear and nonlinear systems] Metod blizkikh sistem i ego primenenie dlia sozdaniia inzhenernykh metodov rascheta lineinykh i nelineinykh radiotekhnicheskikh sistem. Moskva, Izd-vo Akad.nauk SSSR, 1961. 250 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Kharkevich). (Radio) (Automatic control)

TURBOVICH, I. T.

Doc Tech Sci - (diss) "Method of "rapid systems" and its application for the creation of engineering methods of designing linear and non-linear radio engineering systems." Moscow, 1961. 21 pp; (Ministry of Communications USSR, Moscow Electrical Engineering Inst of Communications); 150 copies; price not given; list of author's works on pp 19-21 (15 entries); (KL, 7-61 sup, 230)

21525

S/108/61/016/004/002/006
B116/B212

9.3200 (2902, 2301, 1031, 1040)

AUTHOR: Turbovich, I. T., Member of the Scientific and Technical Society of Radio Engineering and Electrical Communications

TITLE: Pseudo-linear method and its application to the calculation of harmonic frequency multipliers and frequency dividers

PERIODICAL: Radiotekhnika, v. 16, no. 4, 1961, 11-19

TEXT: In the present paper, it is shown that the equivalent-circuit diagram for harmonic frequency multipliers and dividers can be represented by two four-terminal networks connected in series, where one is an inertialess non-linear and the other inertial linear one. This makes it possible to use the method of the dynamic transfer constant and to calculate the dynamic conditions for frequency multipliers and dividers quite easily. Many papers of L. I. Mandel'shtam and N. D. Papaleski (Refs 1, 2: ZhTF, v. IV, no. 1, 1934) and their students A. Melik'yan (Ref. 3: ZhTF, v. IV, no. 1, 1934) and I. T. Turbovich (Ref. 4: ZhTF, v. V, no. 7, 1935), and also papers of Yu. B. Kobzarev (Ref. 5: ZhTF, v. V, no. 3, 1935) have been devoted to frequency division. In a number of

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cases, harmonic frequency dividers will operate like linear systems. This makes it possible to develop a theory for the calculation of such dividers, which is based on calculation methods for linear systems. Such non-linear systems can be considered to be a special class of "pseudo-linear" systems, and its calculation method may be called a pseudo-linear one. Unlike in quasi-linear systems, the influence of non-linear elements on the processes occurring in pseudo-linear systems cannot be assumed to be small. Only under certain conditions (if the limitations imposed on the form of the e.m.f. are fulfilled) the dividers will act like linear systems. Now, three examples of pseudo-linear systems are presented (Figs. 1, 2, and 3). In the first example, a harmonic voltage $A \sin \omega t$ is applied to the system; its frequency ω and amplitude A can be varied in certain limits: $\omega_{min} \leqslant \omega \leqslant \omega_{max}$ and $A_{min} \leqslant A \leqslant A_{max}$. The system consists of the element 3 which generates the second harmonic of the input voltage, and the limiter 4 which keeps the second harmonic constant at one of the inputs of multiplier 5. The harmonic input voltage is applied directly to the other input of the multiplier. At the output of the band-pass filter 6, a purely harmonic oscillation having the same

frequency as the input voltage is obtained. Fig. 2 shows the equivalent-circuit diagram for such an operation. It only has the band-pass filter which differs from the first one (Fig. 1) in that the modulus of its transfer constant is a times larger than that of the first one. The linearity of the system is seen from the fact whether a superposition depending on the character of the superimposing voltages is possible. The system as given in the second example (Fig. 1) brings about a frequency multiplication by keeping the proportionality between the amplitudes of the input and output voltages. The third example (Fig. 3) represents the circuit of a proportional harmonic frequency divider (n times). Now, the operators $\overset{n}{У}$ and $\overset{n}{Д}$ of frequency multiplication and division are introduced. They can be applied to quasi-harmonic functions only; the amplitude of these functions remains constant while the phase angle and the instantaneous frequency will increase or decrease n times:

$$\overset{n}{У}\,[A(t)\sin\varphi(t)] = A(t)\sin n\varphi(t) \qquad (1)$$

$$\overset{n}{Д}\,[A(t)\sin\varphi(t)] = A(t)\sin\varphi(t)/n \qquad (2),$$

where $\varphi(t) = \int \omega(t)dt$ and $A(t)\sin\varphi(t)$ are quasi-harmonic functions which satisfy the frequency and amplitude limitations mentioned. From (1) and

(2) it can be seen that these operators are non-linear and inertialess, i.e., frequency multiplication and division are done without a shift in time. A four-pole (which is equivalent to the operator of frequency multiplication or division) is such an inertialess four-pole where, if a quasi-harmonic voltage is applied to the input of the system, a harmonic component of the n-fold frequency will occur among the other voltage components. The amplitude of the component will be proportional to the amplitude of the input voltage. Therefore, the equivalent-circuit diagram of a proportional-frequency multiplier has to have a linear filter besides the non-linear operator equivalent. Based on these explanations the equivalent-circuit diagrams are presented for the examples mentioned above: Fig. 4 for the diagram shown in Fig. 1, and Fig. 5 for the diagram shown in Fig. 3. The calculation method consists in representing the non-linear inertial transfer constant $H_n(\omega)$ (it takes the frequency multiplication or division and the frequency characteristic of the linear filter into account) as a product of the non-linear inertialess operator y_n and the linear inertial transfer constant $K(\omega)$. The spectral method cannot even be applied to those frequency multipliers and dividers which

might be considered to be pseudo-linear systems. But the method of the dynamic transfer constant described by the author in Ref. 11 ("Radiotekhnika", v. 15, No. 1, 1960) may be used together with the multiplication and division of the frequency to calculate transients in pseudo-linear systems. It is assumed that a frequency- and amplitude-modulated quasi-harmonic oscillation is acting on the proportional harmonic frequency multiplier or divider. For the general case (an e.m.f. of the type $A(t)\sin\varphi(t)/n$ is acting on the frequency multiplier, and one of the type $A(t)\sin n\varphi(t)$ on the frequency divider) the following expression is obtained for the multiplier:

$$U_{вых}=U_{вх}\cdot\overset{n}{У}\left[K+\sum_{n=1}^{m}\frac{(-1)^n}{n!}\alpha_n\frac{d^nK}{d\omega^n}+R_m\right]=U_{вх}\cdot\overset{n}{У}\cdot K_\partial; \qquad (10)$$

and for the divider :

$$U_{вых}=U_{вх}\cdot\overset{n}{Д}\left[K+\sum_{n=1}^{m}\frac{(-1)^n}{n!}\alpha_n\frac{d^nK}{d\omega^n}+R_m\right]=U_{вх}\cdot\overset{n}{Д}\cdot K_\partial. \qquad (11)$$

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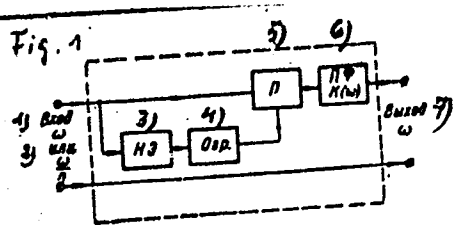
where R_m denotes the remaining term of the expansion, whose amount determines the error; α_n have to be taken from tables. The dots on A and ω denote the derivatives with respect to time. There are 5 figures, 1 table, and 11 Soviet-bloc references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A. S. Popov) [Abstracter's note: Name of association was taken from first page of journal]

SUBMITTED: September 2, 1960

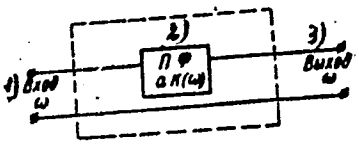
Pseudo-linear method and its...

Fig. 1



Legend to Fig. 1:
1) Input; 2) or; 7) output.

Fig. 2



Legend to Fig. 2:
1) Input; 2) band-pass filter; 3) output.

Card 7/10

Pseudo-linear method and its...

Legend to Fig. 3:
1) Input; 2) multiplier;
3) limiter; 4) band-pass
filter; 5) band-pass filter;
6) non-linear element; 7) output.

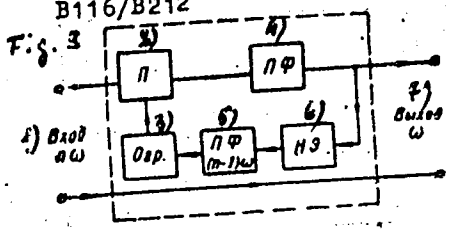


Fig. 3

Legend to Fig. 4;
1) Input; 2) operator of multiplication;
3) band-pass filter; 4) output.

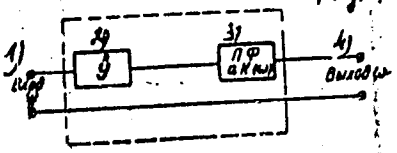


Fig. 4

Legend to Fig. 5:
1) Input; 2) operator of division;
3) band-pass filter; 4) output.

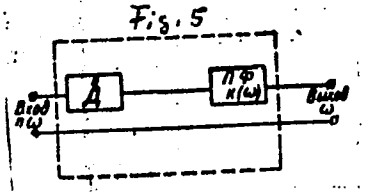


Fig. 5

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TABLE

	Модуляция по частоте и амплитуде	Модуляция по частоте $A=\text{const}$	Модуляция по амплитуде $\omega=\text{const}$
a_1	$-\frac{\dot{A}}{A}$	0	$-\frac{\dot{A}}{A}$
a_2	$\frac{\dot{A}}{A}+i\dot{\omega}$	$i\dot{\omega}$	$\frac{\ddot{A}}{A}$
a_3	$-\left(\frac{\dddot{A}}{A}+i\ddot{\omega}+3i\dot{\omega}\frac{\dot{A}}{A}\right)$	$i\ddot{\omega}$	$-\frac{\dddot{A}}{A}$
a_4	$\frac{A^{(IV)}}{A}+i\dddot{\omega}-3\dot{\omega}^2+4i\frac{\dot{A}}{A}\ddot{\omega}+6i\frac{\ddot{A}}{A}\dot{\omega}$	$i\dddot{\omega}-3\dot{\omega}^2$	$\frac{A^{(IV)}}{A}$

Card 9/10

Legend to Table: 1) Frequency and amplitude modulation; 2) frequency modulation; 3) amplitude modulation. Subscripts to formulas (10) and (11): U_{66IX} stands for U_{output}; U_{6A} for U_{input}; K_{∂} for $K_{dynamic}$, the dynamic transfer constant.

a_6	$-\left(\frac{A^{(V)}}{A}+10\omega^{(IV)}-10\ddot{\omega}\dddot{\omega}+5\frac{\dot{A}}{A}\ddot{\omega}-15\frac{A}{A}\dot{\omega}^3+20\frac{\ddot{A}}{A}\dot{\omega}+20\frac{\dot{A}}{A}\ddot{\omega}\right)$	$-10\omega^{(IV)}+10\ddot{\omega}\dddot{\omega}$	$-\frac{A^{(V)}}{A}$

TABLE CONTD.

Card 10/10

L 16893-66 EWT(d)/T/EWP(1) IJP(c) BB/GG/GS

ACC NR: AT6004683 SOURCE CODE: UR/0000/65/000/000/0003/0010

57
B+1

AUTHOR: Turbovich, I. T.

ORG: none 16,44

TITLE: The optimum method of pattern recognition for mutually correlated characteristics

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 3-10

TOPIC TAGS: pattern recognition, correlation statistics, algorithm

ABSTRACT: In various papers dealing with the design of recognition machines the unidimensional distribution functions are established after sampling, then, assuming the characteristics are truly independent, the multidimensional distribution function is found. In this case the machine applies the minimization of error probability. In practice, however, it is in general impossible to establish a sufficiently complete system of uncorrelated characteristics. Consequently, the present author discards the statistical approach. The optimization criterion of the recognition machine is

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ACC NR: AT6004683

sought in the minimum of the number of standards needed for comparison (i.e., the simplicity of the recognizing device) rather than in the minimum of the error probability. The minimum of the number of standards is found by means of the so-called association function. Each point in the space of the characteristics is described by the totality of standard-associating functions. The standard-associating function of an arbitrary pattern is positive if the point of the space of characteristics under consideration is closer to that standard than an arbitrary realization of another pattern; otherwise, the associating function is equal to zero. All members of the pattern will be recognized by the machine if at points corresponding to all the realizations of the given pattern the associating function to one (or more) standards of this pattern is larger than zero, whereas at points corresponding to the realization of all the other patterns all standard-association functions of the given pattern are equal to zero. The paper discusses various algorithms needed for the carrying out of the program proposed. Orig. art. has: 4 formulas, 3 figures, and 6 tables.

SUB CODE: 12, 09 / SUBM DATE: 25Sep65 / OTH REF: 003

Card 2/2 SM

L 16909-66 EWT(d)/T/EWP(1) IJP(c) GG/BB/GS

ACC NR: AT6004687 SOURCE CODE: UR/0000/65/000/000/0025/0029

56
55
0+1

AUTHOR: Turbovich, I.T.; Petrov, O.A.

ORG: none

TITLE: A method for the complete description of unidimensional patterns by means of the totality of simple functions (applicable to speech signals) [Paper presented at a Scientific Conference of IPPI AN SSSR 11 December 1963]

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 25-29

TOPIC TAGS: pattern recognition, speech recognition

16C,44

ABSTRACT: One of the basic problems in unidimensional pattern recognition is the establishment of appropriate characteristics (functionals) which differ little for all the realizations of the given pattern and differ substantially from the realizations of all other possible patterns. A significant simplification can be achieved by performing a preliminary decomposition of a complete description into a set of several simple descriptions. The present article outlines theoretically and experimentally one of

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L 16909-66
ACC NR: AT6004687

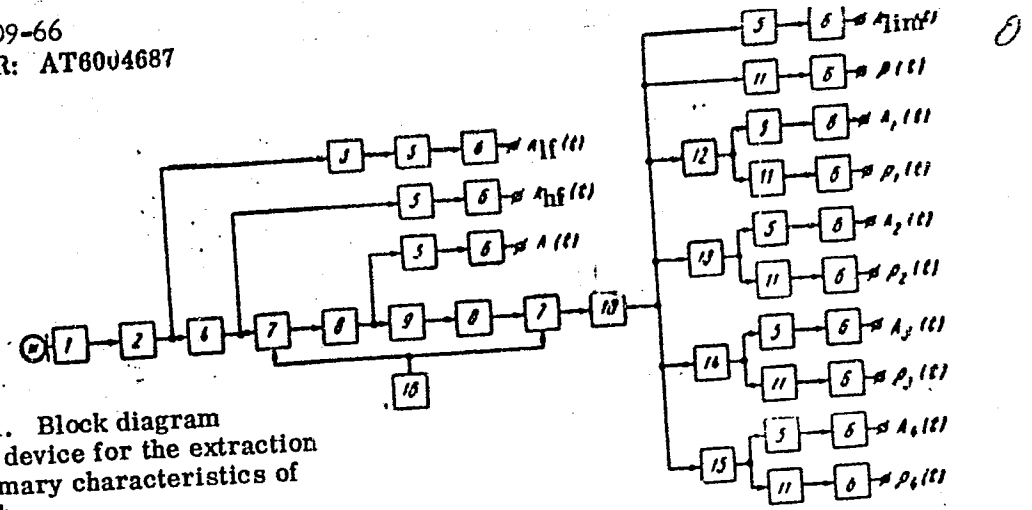

Fig. 1. Block diagram of the device for the extraction of primary characteristics of speech.

1 - Microphone amplifier; 2 - differentiator; 3 - low frequency filter (0-400 cps); 4 - band filter (400 — 7,000 cps); 5 - detector; 6 - low frequency filter (0 — 50 cps); 7 - balancer modulator; 8 - band filter (25 400 — 3,200 cps); 9 - limiter; 10 - low frequency filter (0 — 7,000 cps); 11 - standard pulse shaper; 12 - band filter (400 — 900 cps); 13 - band filter (900 — 2,000 cps); 14 - band filter (2,000 — 4,000 cps); 15 - band filter (4,000 — 7,000 cps); 16 - quartz generator (25Kc).

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L 16909-66
ACC NR: AT6004687

such possible decompositions in which a quasi-harmonic signal is split into an instantaneous amplitude signal and an instantaneous frequency signal. The basic theoretical relationships are applied to human speech and the results of the theoretical development are tested by means of an experimental setup (Fig. 1). The unit processed the primary characteristics of 15 letter sounds dictated by 40 persons. The analysis of the statistical data showed that the set of primary characteristics simplifies sufficiently the original signals and allows the establishment of invariant characteristics needed for reliable identification of letters. Authors thank Cand. of Techn. Sci. A.V. Knipper for his help in the development of the experimental equipment. Orig. art. has: 7 formulas and 1 table.

SUB CODE: 05 / SUBM DATE: 25Sep65 / ORIG REF: 006/ OTH REF: 001

09/

Card 3/3

L 39409-66 EWT(d)/T/EWP(...) IJP(c) ...

ACC NR: AT6004685 SOURCE CODE: UR/0000/65/000/000/0016/0020

AUTHOR: Knipper, A.V.; Petrov, O.A.; Turbovich, I.T.

ORG: none

TITLE: The feasibility of obtaining the characteristics of unidimensional patterns which are scale invariant [Paper presented at a Scientific Conference of IPPI AN SSSR on 10 April 1964]

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 16-20

TOPIC TAGS: speech recognition, pattern recognition, speech signal

ABSTRACT: In the classification of functions which describe patterns, it is often expedient to put into a single class functions which are similar in form but which differ in the scale of the independent variable and of the function itself. Thus, the functions $y = f(t)$ and $y_1 = \lambda f(\mu t)$ would belong to the same class for arbitrary λ and μ. The present paper outlines a method for the description of the $y(t)$ function which is invariant to both types of scale changes. This approach for the establishment of appropriate

Card 1/2

TURBOVICH, L. T.

Apr 1947

USSR/Physics
Diffusion
Evaporation (Meteorology)

"Turbulent Diffusion and Its Function in the Evaporation of Water from the Surface of the Oceans," L. T. Turbovich, 6 pp

"Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki"
Vol XVII, No 4 - p. 366-74

The possibility of describing turbulent diffusion with the help of the Brownian movement theory is examined. The limiting processes of long- and short-period diffusion is studied. A possible mechanism of evaporation of water from the surface of the ocean is dis-

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ID

Apr 1947

USSR/Physics (Contd)

cussed which is based on the nature of turbulent diffusion and shows the desirability of measuring the vertical pulsation of speed at various heights. This is necessary for constructing a complete theory of evaporation from the oceans.

Arctic Sci. Res. Inst.

34T77

ID

TURBOVICH, L. T.

Turbovich, L. T. "Turbulent diffusion and its role in certain processes occurring in the atmosphere and in the hydrosphere", Problemy Arktiki, 1948, No. 2, p. 21-41, - Bibliog: 28 items.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

POCHTMAN, S.M., kand.med.nauk, TURBOVSKAYA, O.S., kand.med.nauk, MIRNAYA, M.P. nauchnyy sotrudnik

Insulin in the treatment of certain eye diseases. Oft.zhur. 13 no.3:136-139 '58 (MIRA 11:6)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta glaznykh bolezney im. prof. Girshmana (direktor - zasluzhennyy deyatel' nauki, chlen-korrespondent AMN SSSR prof. I.I. Merkulov).
(INSULIN)
(EYE--DISEASES AND DEFECTS)

...MLOVA, O. S.

42737. MERKULOV, I. I. i TURSOVSKAYA, O. S. Dinamika Zabolevayemosti Glaukomoy v Poslevoennyye Gody. Oftalmol. Zhurnal, 1948, No 3, S. 116-20.

SO: Letopis 'Zhurnal 'nykh Statey, Vol. 7, 1949

TURBOVSKAYA, O. S.

Turbovskaya, O. S. "Treating diseases of the corneal membrane with preserved placenta," Oftalmol. zhurnal, 1949, No. 1, p. 21-24.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

TURBOVSKIY, A.

For the well-being of the people. Obshchestv.pit. no.1:18-20 Ja '62. (MIRA 15:4)

1. Direktor khar'kovskogo restorana "Dinamo".
(Kharkov--Restaurants, lunchrooms, etc.)

TURBOVSKIY, M.M., kand. tekhn. nauk, dotsent

Mechanism of the process occurring during liquid modification. Izv. vys. ucheb. zav.; chern. met. 2 no.2:101-105 Mr '59. (MIRA 12:7)

1. Sredneaziatskiy politekhnicheskiy institut. Rekomendovana kafedroy mashin i tekhnologii liteynogo proizvodstva Sredneaziatskogo politekhnicheskogo instituta.
(Iron--Metallurgy)

TURBOVSKIY, M.M., kand.tekhn.nauk

Modified cast iron with addition of liquid steel. Lit.proizv. no.3:4-7 Mr '59. (MIRA 12:4)
(Cast iron--Metallurgy)

18(5)

SOV/128-59-3-3/31

AUTHOR: Turbovskiy, M.M., Candidate of Technical Sciences

TITLE: Inoculation of Cast Iron by Addition of Liquid Steel

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 3, pp 4-7 (USSR)

ABSTRACT: The quality of iron castings can be considerably improved by solid or liquid inoculation. The method of liquid inoculation is more convenient inasmuch as it requires no overheating. It can be used in foundry shops where two cupolas or other smelting units work simultaneously. Late in 1956, a new method of liquid inoculation was introduced in the foundry shop of the Tashsel'mash works: gray cast iron melted in a 5-ton cupola was inoculated with liquid steel obtained in a converter with side blast. The dosage of liquid steel depends on the wall thickness of the cast piece; it can be increased for pieces with thicker walls. The requirements regarding the precision of dosage are not so high as in case of solid inoculation. The minimum addition of liquid steel is desirable for purposes

Card 1/2

Inoculation of Cast Iron by Addition of Liquid Steel

of economy and for prevention of the whitening of thin-walled cast pieces. On the other hand, inoculation with larger quantities of liquid steel improves such mechanical characteristics of the inoculated cast iron as flexional strength , deflection and Brinell hardness. The author demonstrates that the mechanical characteristics is a result of the process of inoculation rather than of a slight modification in chemical composition. There are 3 tables, 12 diagrams and 10 Soviet references.

TURBOVSKIY, M.M.

Homogeneity of inoculated cast iron. Lit.proizv. no.7:22-23 Jl '62. (MIRA 16:2)
(Cast iron—Metallurgy)

TURBOVSKIY, M.M.

Production of graphitized steel by liquid inoculation of melts.
Lit. proizv. no.6:29-31 Je '64. (MIRA 18:5)

TURBOVSKIY, M.M.

Molding sands of Central Asia. Lit. proizv. no.3:44 Mr '65.
(MIRA 18:6)

TURBOVSKIY, M.M.; ROMANOV, O.B.

Blades of throwing wheels made of graphitized steel. Lit.proizv. no.7:39 Jl '64. (MIRA 18:4)

128-58-6-2/17

Turbovskiy, M.M.

AUTHOR: Turbovskiy, M.M., Candidate of Technical Sciences

TITLE: Selection of the Melting Aggregate for Malleable Cast Iron in Agricultural Machine Building (Vybor plavil'nogo agregata dlya kovkogo chuguna v sel'skokhozyaystvennom mashinostroyenii)

PERIODICAL: Liteynoye Proizvodstvo, 1958, Nr 6, pp 2-4 (USSR)

ABSTRACT: The two most common methods of producing malleable cast iron are the duplex-process cupola-electric furnace, and the cupola process. The first is used at all automobile plants and in some agricultural machine plants. With high quality malleable iron of grade "KCh-8" and higher now obtainable by the cupola process, the duplex process appears to be no longer worth while for agricultural machines. The article gives the results of a study of the chemical composition and mechanical properties of white cupola cast iron and of the malleable cast iron produced by different processes for the purpose of comparison at the agricultural machine plants Tashsel'mash, Uzbeksel'mash, Chirchiksel'mash, and Lyuberetskiy. It is mentioned that the initial materials and coke used at the first three of the above plants are supplied by the same Angerovskiy koksokhimicheskiy zavod

Card 1/2

128-58-6-2/17

Selection of the Melting Aggregate for Malleable Cast Iron in Agricultural Machine Building

(Kemerovo Coke-Chemical Plant) so that they were identical. It is concluded that the cupola process with blowing-through by oxygen in the receiver is accompanied by superheating and some oxidation of metal. This favors the modification of white iron and makes it more stable. The prime cost of liquid iron produced by this process is considerably less than the prime cost of iron produced by the duplex process. There are 8 diagrams, 2 charts and 9 Soviet references.

AVAILABLE: Library of Congress

Card 2/2 1. Cast iron-Preparation 2. Cast iron-Production 3. Cast iron-Casting

TURBOVSKIY, M. M.

Modifitsirovannyi kovkii chugun. (Vestn. Mash., 1948, no. 9, p. 38-41)

(Modified malleable cast iron.)

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

Mechanism of liquid modification process

TIRDOVSKIY, M. M.

Iron Founding

Liquid modification. Lit. proiz. no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.
2

TURBOVSKIY, M.M.

USSR/Miscellaneous - Foundry processes

Card 1/1 : Pub. 61 - 21/23

Authors : Turbovskiy, M. M.; Rubakhin, A. R/; and Berkovich, Kh. L.

Title : Teapot type bucket with syphon tube made of graphite mixture

Periodical : Lit. proizv. 3, 31-32, May-June 1954

Abstract : The advantages of using teapot type buckets with graphite syphon tubes instead of refractory tubes in casting processes, are outlined. Three USSR references (1951 and 1953). Drawing.

Institution : ...

Submitted : ...

TURBOVSKIY, M.M., dotsent, kandidat tekhnicheskikh nauk.

Dzhilgin sand as a molding material. Lit.proizv. no.6:25-26 Je '56. (MLRA 9:8)

(Sand, Foundry)

"URBOVSKIY, M.M.

The mechanism of fluid modification. Lit. proizv. no.2:15-16 F '56. (Iron founding) (MLRA 9:6)

TURBOVSKIY, M. M.

"Molten Inoculation," Liteynoye Proizvodstvo (1952) No 6, pp 16/18.

B-73331, 1 Apr 54

TURBOVSKIY, M.M.

Use of Tas-Kazganskiy limestone for decreasing the sulfur content in cast iron and steel. Lit.proizv. no.5:5-6 Ag '54.(MLRA 7:8)
(Iron--Metallurgy) (Limestone)

TURBOVSKIY, M.M.; RUBAKHIN, A.R.; BERKOVICH, Kh.L.

Pot ladle with syphon tube made from a graphite mixture. Lit.proizv. no.3:31-32 My-Je '54.
(Founding) (MLRA 7:6)

TURBOVSKIY, M.M.

USSR.

Desulphurization of Iron and Steel with Limestone from Tas-Kazansk. M. M. Turbovskii. (*Liteinoe Proizvodstvo*, 1954, (6), 5-6). [In Russian]. The effects of a change in limestone quality on cupola operation and on the sulphur contents of various irons are described. The two limestones considered contained 84-93% and 97-98% calcium carbonate, respectively.—S. K.

TURBOVSKIY, M.M.

1487* Influence of Oxygen Blowing of Forgeable Cast Iron on Its Mechanical Properties. Vliianie produvki kislorodom na mekhanicheskie svoistva kovkogo chuguna. (Russian.) M. M. Turbovskii. *Liteinoe proizvodstvo*, 1955, no 10, Oct., p. 24-25.

Presents the above with special consideration to the use of cast iron in agricultural machine parts. Results obtained in past yrs. Table, graphs. 4 ref.

TURBOVSKIY, M. M.

Liquid modification. M. M. Turbovskii. *Liteinoe Proizvodstvo* 1952, No. 6, 10-18.—When 20-30% of molten gray iron is added to white iron, the latter is changed into a gray iron with finely divided graphite, though its chemical compn. after modification still places it among white or mottled irons. The percentage of gray iron to be added is selected inversely proportionally to the thickness of the intended casting. This modification increases mech. properties of the iron and reduces the spread among individual values. Increasing this addn. to 50% leads to a slight reduction of the phys. properties, that of 75-80% causes a sharp drop in them, though the properties of the iron modified in this manner remain greater than those of the original gray iron.
J. D. Gat

TURBOVSKIY, M. M.

PA 37/49T104

USSR/Metals
Cast Iron
Iron, Malleable

Sep 48

"Modified Malleable Cast Iron," M. M. Turbovskiy, Engr, 3 pp

"Vest Mashinostroy" Vol XXVIII, No 9

High cost of malleable iron castings is due to prolonged annealing required. This can be shortened 50 - 75% by method of modification described. Includes four graphs.

FDB

37/49T104

USSR/Metallurgy - Cast Iron, Casting Jun 52

"Liquid Modification," M. M. Turbovskiy, Cand Tech Sci

"Litey Proizvod" No 6, pp 16-18

Presents results of exptl study of liquid modification, which involves process of adding definite amt of liquid gray cast iron with 3.2-3.5% C and 2-2.4% Si into ladle with white cast iron contg 2.8-3.1% C and 0.7-1.2% Si. As result, article states, white iron converts into gray iron with finely divided graphite, despite fact that, by

230T40

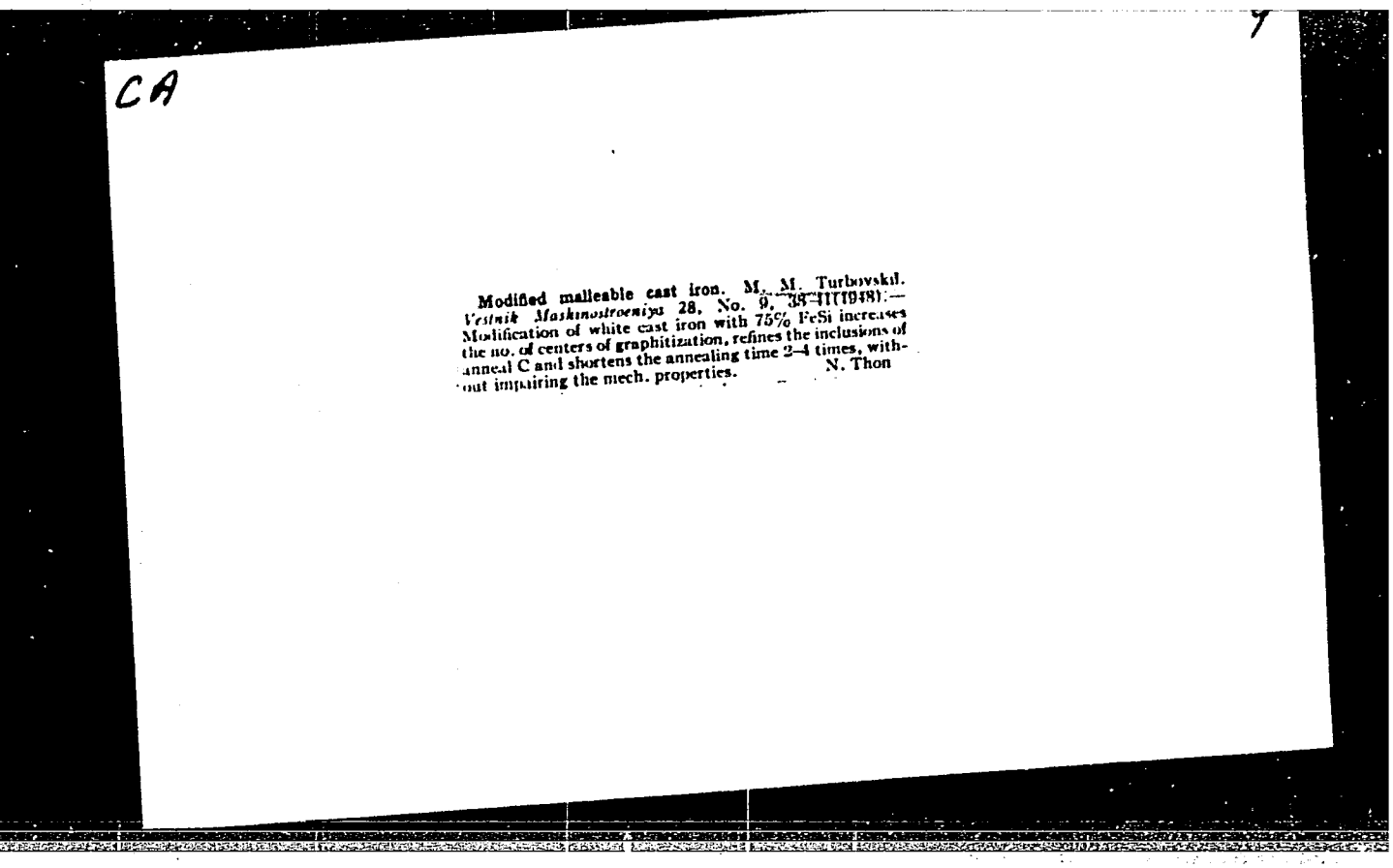
chem compn and in conformity with structural diagram, it belongs to white or mottled irons. Modified cast iron possesses high homogeneity and improved mech properties.

230T40

TURBOVSKIY, M. M.

TURBOVSKIY, M.M.; FUKLEV, V.A.

Graphite lining mixture for steel castings. Lit.proizv. no.6:28-29 Je '53. (MLRA 6:7)
(Foundry supplies)



CA

Modified malleable cast iron. M. M. Turbovskil. *Vestnik Maskinostroeniya* 28, No. 9, 38–41(1948).—Modification of white cast iron with 75% FeSi increases the no. of centers of graphitization, refines the inclusions of anneal C and shortens the annealing time 2–4 times, without impairing the mech. properties. N. Thon

KOCHERGA, A., kand.ekon.nauk (Kiyev); TURBOVSKIY, S. (Kiyev)

"How to read a balance sheet of a commercial enterprise" by P.T.Evseev. Reviewed by A.Kocherga, S.Turbovskii. Sov. torg. 35 no.9:55-56 S '62. (MIRA 16:2)

(Lvov Province--Retail trade--Accounting) (Evseev, P.T.)

TURBOYSKI, Leslaw, dr

Report on the activities of the Chemical and Biological Laboratory of the Institute of Water Management in Krakow. Gosp wodna 23 no. 10:403-404 O '63.

1. Department of Water Protection and Utilization in Katowice and Chemical and Biological Laboratory in Krakow of the Institute of Water Management.

TURBUIR, M., ing.

Urban traffic. St si Teh Buc 16 no. 5: 24-27 May '64.

: [illegible]

: [illegible] of Farm Animals. Diseases Caused by Bacteria and Fungi

: RZhBiol., No. [illegible], 195[illegible], No. [illegible]

: [illegible]; [illegible], A.

: --

: The Control of Fowl Cholera with [illegible] Antivaccine

: [illegible] 1957, [illegible] 38-[illegible]

: The antivaccine is prepared as follows: material from fowls which perished from cholera is [illegible] on a [illegible] peptone broth with [illegible] kept at 37° for two days, [illegible] with [illegible] phenol. The vaccine is administered to hens and ducks intramuscularly in a dose of [illegible] twice, with an interval of [illegible] days. The vaccine is the best means of [illegible] fowl cholera.-- S. [illegible]

Card: 1/1

M-22

TURBUTIU, G.

Concerning Automatically Controlled Streetcar Circuits. Electrical Engineering, #5:126:May 55

TURBUTIU, G.

Calculatien of Some Basic Parameters of Electric Traction, as a Functien of Time, by a Graphic Method. Electrical Engineering, #11:478:Nov. 55

Turbutiu, G.

Graphic calculation of basic parameters of electic traction in function of time. p. 473. ELECTROTEHNICA. (Asociata Stiintifica a Enginerilor si Tehnicienilor din Rominia si Ministerul Energiei Electrice si Industriei Electrotehnice) Bucuresti. Vol. 3, no. 11, Nov. 1955

So. East European Accessions List Bol. 5, no 9 September, 1956

TURBUTIU, G.

Some problems connected with the introduction of new techniques into the electric traction in the capital.

p. 65
Vol. 4, no. 2, Feb. 1956
ELECTROTEHNICA
Bucuresti

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12
December 1956

TURBUTIU, Gheorghe, ing.

Productivity of work in municipal transportation. Rev transport 9 no.12:520-527 D '62.

NEUZIL, Lubomir, TURCAJ, Jan; VALTER, Vladimir

Fluidization of crystal sugar. Listy cukrovar 80 no. 7: 182-191 Jl '64.

1. Chair of Processes and Apparatus, Higher School of Chemical Technology, Prague (for Neuzil and Turcaj).
2. Prazske cukrovary National Enterprise, Cakovice (for Valter).

RACHINSKIY, V.V., prof. doktor khim. nauk; IGUMNOVA, I.A.; SALDADZE, K.M.; TURCHAK, Ye.B.

Comparative determination of the absorption capacity of anion exchangers by using the weight, statical, isotope exchange, and radiochromatographic methods. Izv. TSKHA no.6:195-201 '64 (MIRA 18:1)

1. Kafedra prikladnoy atomnoy fiziki i radiokhimii Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni K.A. Timiryazeva.

TURCAN, P., dr.; TURCANU, Valentina, dr.

Active detection of diabetes mellitus and prediabetic states in the population of the town of Jimbolia. Med. intern. (Bucur) 17 no.6:703-708 Je'65.

1. Lucrare efectuata la Centrul antidiabetic al Policlinicii Jimbolia.

ILIESCO, M.; BERCEANU, St.; TURCANU, Al.; VAINER, Henriette; RADULESCO, Elena; TAGA, M.

Study of the changes in blood proteins in horses experimentally infected with A.I.C. virus (infectious anemia of horses) and their relations to the morphological and immuno-serological changes. Arch. Roum. path. exp. microbiol. 20 no.3:491-501 S '61.

1.Travail de l'Institut "Dr. I. Canacuzino" Services d'Hematologie-Serologie et d'Immunochimie.
(VIRUS DISEASES experimental) (HORSES diseases)
(BLOOD PROTEINS) (RETICULOENDOTHELIAL SYSTEM pathology)

SUSAN, B.; DOBOSIU, C.; TROIANESCU, O.; TURCANU, B.; ORFANU, N.; PANAITIU, P.

Some observations on the treatment of pseudarthrosis of the long bone. Chir. narz. ruchu ortop. polska 27 no.2:225-233 '62.

1. Z Kliniki Ortopedycznej i Traumatologicznej Szpitala I.C.Trimu w Bukarezcie.

(PSEUDARTHROSIS ther)

TURCANU, Constantin, ing.

Use of turbo-propeller engines in aviation. Rev transport 12 no.1: 31-35 Ja '65.

E-2

Country : Rumania
Category : Analytical Chemistry -- Analysis of Inorganic Substances
Abs. Jour : Referat Zhur -- Khim, No 13, 1959, 45500

Author : Todoasa, A., Ciolan, D., Kovacas, A., and Turcanu, C.
Inst. : Not given
Title : The Determination of Iron and Aluminum in Their Binary Mixtures

Orig. Pub. : Rev Chim, 9, No 10, 577-578 (1958)

Abstract : A modified benzoate method (RZhKhim, No 16, 1956, 51123) is used for the determination of Al(3+) in binary mixtures with Fe(3+); the procedure is based on the preliminary separation of Fe(3+) by precipitation as $Fe(OH)_3$ with excess NaOH (rather than reduction to Fe(2+)). The solution to be analyzed, containing Fe(3+) and Al(3+), is diluted with water to 150 ml and heated to boiling, after which an excess of 2N NaOH is added. The $Fe(OH)_3$ precipitate which is formed is filtered, washed

Card: 1/3

Country : Rumania E-2
Category : Analytical Chemistry -- Analysis of Inorganic Substances
Abs. Jour : Referat Zhur -- Khim, No 13, 1959 45500

Author :
Institut. :
Title :

Orig Pub. :

Abstract : with hot water, dissolved in HCl, reprecipitated with ammonia, washed, and ignited to Fe_2O_3. The filtrates and wash solutions are acidified with hydrochloric acid to pH 5-5.5 (in the presence of methyl red), heated, and 30-40 ml of 5% ammonium benzoate solution is added. The solution and the $Al(OH)_3$ precipitate which is formed are allowed to stand for 10-15 min over a water bath, the $Al(OH)_3$ precipitate is filtered, washed with hot solution containing 5 ml of 5% ammonium benzoate solution and in 1 ml conc CH_3COOH [omission?] per 100 ml solution, ignited to Al_2O_3, and weighed.

Card: 2/3

L 18433-63 EPR/EWT(1)/FS(b)/EWG(k)/BDS/EEC(b)-2/ES(w)-2 AEDC/AFFTC/ASD/ESD-3/
APGC/AFWL/IJP(C)/SSD Ps-4/Pz-4/Pab-4/Pi-4 WW/AT

R/0002/63/000/007/0036/0038

86

ACCESSION NR: AP3003351

AUTHOR: Turcanu, Constantin

TITLE: Plasma in rocket engines

SOURCE: Stiinta si tehnica, no. 7, 1963, 36-38

TOPIC TAGS: plasma, rocket engines, power source

ABSTRACT: A popularized review article on the use of plasma in rocket engines is presented. Refers to the astronautical congress held in Varna, Bulgaria in September 1962, when several papers were read on the phenomena occurring during the operation of such rocket engines, especially with regard to plasma physics. Emphasizes the importance of the study of plasma and its space implications in connection with problems such as guided thermonuclear reactions requiring very high temperatures, the obtaining of electric energy from heat, and the study of materials at high temperatures. Outlines the means of obtaining plasma in the laboratory, namely through plasmatrons with electric arc, electric discharges in gases, in thermonuclear installations, and within the framework of nuclear explosions. Describes the operating principles, construction and probable uses of

Card 1/2

L 18433-63
ACCESSION NR: AP3003351

experimental plasma rockets such as electrothermic, electromagnetic and electrostatic rockets. Orig. art. has a sketch of an electrothermic plasma rocket, of an electromagnetic plasma engine and of the principle of operation of an ionic plasma rocket, as well as a sketch on magnetic-electric acceleration with shock tubes and the axial-magnetic field of a rotor-type accelerator.

ASSOCIATION: none

SUBMITTED: -

DATE ACQ: 23 Jul 63

ENCL: 00

SUB CODE: PH, GM

NO REF SOV: 000

OTHER: 000

2/2
Card

FISCHBEIN, E.; HANGEA, N.; POPESCU, I.; RADULESCU, L.; TURCANU, E.; ZAMFIR, E.

Importance of models in the understanding of electricity by pupils.
Rev psihologie 9 no.3:353-385 '63.

TUDORANU, Gh., prof.; BERNEAGA, Ortansa, dr.; TURCANU, H., dr.; NEGOITA, Margareta, dr.; VACARU, Olimpia, dr.; MARINESCU, C., dr.; BORGOVAN, Lucia, dr.

Experience of the Medical Clinic I of Iasi in the problem of bone marrow transplantation. Med. intern. 14 no.10:1245-1251 O '62.

1. Lucrare efectuata la Clinica I medicala Iasi si Centrul de transfuzie Iasi.
(BONE MARROW) (LEUKOPENIA) (BONE MARROW DISEASES)
(RADIATION INJURY) (LEUKEMIA)

I.NITESCU, Eliza, dr.; TUR ANU, L. ; cont; MIHAAI, V., dr.; MIHAI, P., dr.; UNGU, Teodora, dr.

Difficulties of diagnosis of cerebral tumors in children. I. Aphasic-like value of the intracranial hypertension syndrome. (I.H.S.) Pediatria (Bucur.) 13 no.5:379-390 '65.

1. Lucrare efectuata in Serviciile de pediatrie, neurologie si neurochirurgie, Timisoara.

GIRBEA, St , prof.; POPESCU, D., prof.; TURCEANU, L., conf.; DUNAREANU,O., dr.; POPOVICI, V., dr.

The role of diseases of mothers in pregnancy, labor and the puerperium in the origin of deafness in the newborn. Otorinolaringologie (Bucur) 10 no.1:80-88 Ja-Mr'65.

BARAN, Elena, dr.; NICULESCU, Maria, dr.; ROSIN, Angela, dr., si farm.; TURCANU, M.

Considerations on a case of nocturnal paroxysmal hemoglobinuria. Marchiafava-Micheli disease. Med. intern. 13 no.10:1425-1430 O '61.

1. Lucrare efectuata in Clinica I medicala I. M. Iasi, director prof. Gh. Tudoranu.

(HEMOGLOBINURIA, PAROXYSMAL case reports)

TURCANU, Octavian, arh.

Problems which must be solved by beneficiaties. Constr. Buc 14 no.676:3 22 D'62.

1. Directorul Directiei de sistematizare, arhitectura si proiectare a constructiilor, Bucuresti.

TURCAN, P., dr.; TURCANU, Valentina, dr.

Active detection of diabetes mellitus and prediabetic states in the population of the town of Jimbolia. Med. intern. (Bucur) 17 no.6:703-708 Je'65.

1. Lucrare efectuata la Centrul antidiabetic al Policlinicii Jimbolia.

TUCCANU, Valentina

ROMANIA

BACANU, Gh., MD; TUCCANU, Valentina, MD.

Section of Nutrition and Dietetics, Medical Clinic I (Sectia nutritie-dietetica, Clinica I medicala); Director: Professor N. Aubert. - (for all)

Bucharest, Viata Medicala, No 9, 1 May 63, pp 621-625

"Primary Cancer of the Pancreas and Diabetes Mellitus" (Paper submitted to the U.S.S.M., Banat Branch, at the meeting of 30 May 1962.)

COJA, N., conf.; RUSU, O.; TURCAS, A.; VODAILO, St.; GRUNFELD, T.

Staphylococcal infection in the puerperant and the newborn. Microbiologia (Bucur) 6 no.1:28 Ja-F '61.

GAVRILA, I.; COMES, L.; IGNA, M.; BERDILA, L.; MARINA, M.; TURCAS, C.; KIRALY, M.

Transaminase and aldolase in the diagnosis of epidemic hepatitis. Stud. cercet. med. intern. 3 no.4:461-471 '62.
(JAUNDICE) (HEPATITIS, INFECTIOUS) (ASPARTATE AMINOTRANSFERASE) (ALDOLASE)

GAVRILA, I., prof.; COMES, L., conf.; JOSAN, R., dr.; SERBAN, I., dr.; CUCU, Al., dr.; TURCAS, C., dr.

Epidemic hepatitis in the aged (Clinical aspects). Med. intern., Bucur 13 no.1:53-63 Ja '61.

1. Lucrare efectuata in Clinica de boli contagioase, Cluj (prof. I. Gavrila).

(HEPATITIS, INFECTIOUS in old age)

CAPRIOARA, D., prof.; COJA, N., conf.; SASU, V., conf.; RUSU, O.; IDU, V.; FANEA, E.; TURCAS, S.

Staphylococcal infections in gynecology and obstetrics. Microbiologia (Bucur) 6 no.1:22-23 Ja-F '61.

TURCEK, F.

Reliability of the index "number caught per 100 nights" in the quantitative research on small mammals.

P 362, (Biologia) Vol. 12, no. 5, 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

TURCEK, F.

An outline of the community of organisms of poplars (Genus Populus) with special regard to the region of the Great Schutt. p.5.
(BIOLOGICKE PRACE, Vol. 2, no. 2, 1956, Bratislava, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 12, December 1957. Incl

TURCEK, F.

Turcek, F. Some poplar pests on Zitny Ostrov (Schutt). p. 79.

Vol. 10, no. 1, 1955 BIOLOGIA Bratislava, Czechoslovakia

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 2 February, 1956

TURCEK, F.

Turcek, F. In memory of Dr. Vladislav Pasek. p.250.
DAFM

Vol. 10, no. 2, 1955 BIOLOGIA Bratislava, Czechoslovakia

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 2
February, 1956

TUMCAK, F.; K[illegible], J.

D. Rast'abin's Stanovisko prieskum v lekárskej praxi (Analysis of a Locality in Practical Research); a book review. P[illegible]. (Slovenská akadémia vied) Bratislava, Vol. 11, no.4, 1[illegible].

SOURCE: East European Accessions List, (EEAI), Library of Congress Vol. 5, no. 12, December 1956.

TURCEK, F.

TURCEK, F. News of hunting sports abroad. p. 87.

Vol. 12, no. 2, Feb. 1956
LES
AGRICULTURE
Czechoslovakia

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