

FILIPCHIK, V.I. (g.Minsk)

Treatment of pruritus ani with "Anuzol" hemorrhoidal suppositories. Azerb.med.zhur. no.3:77-78 Mr '59. (MIRA 12:6)
(PRURITUS)

BUYLO, A.L.; FILIPCHIK, V.I.

Epidemic parotitis complicated by catarrhal pancreatitis in conjunction with ancylostomiasis and secondary hypochromic anemia.
Zdrav. Belor 5 no.3:60 Mr '59. (MIRA 12:7)

1. Iz voyennogo gosпитalya (nachal'nik gosпитalya Ya. I. Chernilovskiy)
(MUMPS)

FILIPCHIK, V.I.

Clinical aspects and treatment of seborrhea. Zdrav.Belor. 5 no.9:
59-61 S '59. (MIRA 12:12)

1. Iz voyennogo gosptalya (nachal'nik gosptalya - M.V. Seleznev).
(SEBACEOUS GLANDS--DISEASES)

FILIPCHIK, V.I. (Minsk)

Phthivazid treatment of lupus serpiginosus planus. Probl.tub.
37 no.2:93 '59. (MIRA 12:9)
(LUPUS) (ISONICOTINIC ACID)

FILIPCHIK, V.I.

Novocaine-calcium-vitamin complex in dermatology. Zdrav. Belor.
6 no.2:56 F '60. (MIRA 13:6)
(DERMATOLOGY)

FILIPCHIK, V.I.

Penicillin therapy in psoriatic exfoliative erythrodermia.
Kaz.med.shur. 41 no.1:119 Ja-F '60. (MIRA 13:6)
(PENICILLIN) (PSORIASIS)

FILIPCHIK, V.I.

Organization of the prevention of epidermophytosis. Sbor.nauch.rab.
Bel.nauch.-issl.kozhno-ven.inst. 6:356-357 '59. (MIRA 13:11)
(DERMATOMYCOSIS)

FILIPCHIK, V.I.

Successful treatment of Shamberg's purpura with rutin and vitamin
P(citrin). Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 6:376-379
'59. (MIRA 13:11)

(PURPURA(PATHOLOGY))
(RUTIN)
(VITAMINS--P)

FILIPCHIK, V.I.

Evaluation of the results of treating some dermatoses with vitamin B₁₂
Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 6:382-384 '59.
(MIRA 13:11)

(SKIN--DISEASES)
(CYANOCOBALAMINE)

FILIPCHIK, V.I. (Minsk)

Treatment of some skin diseases with popular remedies. Vrach, delo
no.9:979-981 S '59. (MIRA 13:2)

(SKIN--DISEASES)

BUYLO, A.L.; FILIPCHIK, V.I. (Minsk)

Clinical aspects of epidemic parotitis. Kaz. med. zhur.
no.5:76 S-0 '61. (MIRA 15:3)

(MUMPS)

FILIPCHIK, V.I.

Protective and detergent properties of konstalin. Vest.derm.
i ven. no.9:53-56 '61. (MIRA 15:5)
(BARRIER CREAMS)

FILIPCHIK, V.I.

Polyvalent sensitization to sancaphene in patients with true
eczema. Vest.derm.i ven. no.11:69 '61. (MIRA 14:11)
(ECZEMA) (ANTHELMINTICS)

FILIPCHIK, V.I.

Use of a protective detergent bactericidal paste with
furacilin. Zdrav. bel. 8 no.1:60 Ja '62. (MIRA 15:3)
(FURAN)

PROKOPCHUK, A.Ya.; FILIPCHIK, V.I.; YEREMENKO, S.A.; GRINGAUZ, M.Ya.

Problem of the permeability and protection of the skin. Dokl. AN
BSSR 8 no.10:680-681 0 '64. (MIRA 18:3)

1. Institut fiziologii AN BSSR.

L 7791-66 SMT(1)/SEC(k)-2/EWA(h)

ACCESSION NR: AP5027623

UR/0109/65/010/011/2010/2020

621.396.622.029.64.001.24

AUTHOR: Andreyev, V. K.; Lomize, L. G.; Lyudmirskiy, V. I.; Filipchikov, L. L.

TITLE: Calculation of frequency conversion in high-speed serrodyne shf phasemeters with delay lines

SOURCE: Radiotekhnika i elektronika, v. 10, no. 11, 1965, 2010-2020

TOPIC TAGS: shf phase meter, *frequency conversion*, *circuit delay line*

ABSTRACT: The theory is presented and the formulas are developed for amplitudes and phases in a serrodyne shf phasemeter; the conditions of maximum phase deviation at the mixer input are analyzed; the role of the nonlinear-forward and finite-return motions in serrated modulation is clarified. These conclusions and practical recommendations are offered: 1) The maximum modulation frequency can be determined from $T \geq 5 \tau$, where T is the modulation period and τ is the delay time of the long line involved; thus, the maximum speed (or maximum permissible Doppler frequency) is about $0.1/\tau$; the IF corresponds to the 4th or 5th harmonic of the modulation frequency. 2) With the return motion of the modulating voltage, or when the delay time is commensurate with the modulation

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L 7791-66 EWT(1)/EEC(k)-2/EWA(h)

ACCESSION NR: AP5027623

period, the maximum phase deviation is $2\pi n(1 + \beta)$ for operation on the first 2-3 harmonics and is $2\pi n(1 - \beta)$ for operation on higher harmonics, where β is the ratio of the return time to the phase-modulation period. 3) Strict linearity of the modulating voltage and the frequency characteristic of the shf oscillator is not needed; a 20-30% nonlinearity is tolerable. "In conclusion, the authors wish to thank N. I. Malykh and Ye. S. Yampol'skiy for a useful discussion." Orig. art. has: 7 figures and 42 formulas. 2

[03]

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Card 2/2

FILIPICHINSKIY, L.

AUTHOR: Filipichinskiy, L. 46-1-11/20
TITLE: Second Scientific Conference on problems of ultrasonic technique in Poland (Vtoraya nauchnaya konferentsiya po voprosam ultrazvukovoy tekhniki v polshe.)
PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol. III, No. 1, pp. 81 - 82 (U.S.S.R.)
ABSTRACT: Short report on papers read and on participation to the Conference held in Mendsysdroye in Poland, June 18 - 28, 1956, by the Institute of Basic Problems of Technology of the Polish Academy of Sciences. (Institut Osnovnykh problem tekhniki Polskoy Akademii Nauk).
Papers were read dealing with: ultra-sound propagation; generation of acoustical waves and electro-acoustical generators; ultra-sonic material testing methods; practical application of ultrasonics (physical, chemical and biological).

AVAILABLE:

Card 1/1

FILIPCHUK, A.

SYTIN, V., FILIPCHUK, A., redaktor; IGNAT'YEVA, A., tekhnicheskiy redaktor.

[The master from Chukhlomka] Master iz Chukhlomki. Moskva, Moskovskiy rabochii, 1954, 39 p. (MIRA 7:8)
(Smirnov, Ivan Vasil'evich) (Stone, Artificial)

FILIPCHUK, B.A.; BROVAR, I.M.; KOMAROVANSKIY, M.V.; SERAVETS, A.B.

Raising the efficiency of geological and geophysical work in
the region between the Volga and Ural Rivers. Geol. nefti i
gaza 9 no.1:12-15 Ja '88. (MIRA 18:3)

1. Trest Ural'skneftegazovaya. Kazakhskiy politekhnicheskii
institut i Mezhdunarodnaya geofizicheskaya ekspeditsiya.

Исследования геологической структуры северной окраины
Каспийского бассейна, в частности, в отношении его газовой и нефтяной
содержимости. Геол. обзор газу 9 no.1:16-38 Ян '65.

(MIRA 18:3)

PHILIPCHUK, B. I.

PROCESSES AND PROPERTIES INDEX

Calculation of temperatures with the aid of a platinum resistance thermometer. B. I. Philipchuk. *Zavodskaya Lab.*, 14 (6) 631-32 (1948). -- Instead of $t = t_p + 10^{-8}(t - 100)$, P. proposes $t - t_p = f(t_p + t - t_p)$. By substituting $x = t - t_p$, the equation becomes $x = f(t_p + x)$. By using Taylor series and making some rearrangements,

$$x = \frac{f'(t_p)}{1 - f'(t_p)} - \frac{(x/2)f''(t_p)}{1 - f'(t_p)} \dots$$

This equation is suitable for calculations by the method of successive approximations. Sample calculations are given. B.Z.K.

METALLURGICAL LITERATURE CLASSIFICATION

Calculation of temperatures with the aid of a platinum resistance thermometer. B. I. Philipchuk. *Zavodskaya Lab.*, 14 (6) 631-32 (1948). -- Instead of $t = t_p + 10^{-8}(t - 100)$, P. proposes $t - t_p = f(t_p + t - t_p)$. By substituting $x = t - t_p$, the equation becomes $x = f(t_p + x)$. By using Taylor series and making some rearrangements,

PHILIPCHUK, B. I.

PA 43/49T104

USSR/Physics
Temperature - Measurements
Thermocouples
Apr 49

"Calculating Temperatures by Means of a Platinum-Rhodium-Platinum Thermocouple," B. I. Philipchuk, Sci Res Inst of Meteorol imeni D. I. Mendeleev, 3 pp

Metallurgy
"Zavo' Lab" Vol XV, No 4

Temperature t is determined by electromotive force e_t of platinum-rhodium-platinum (90% Pt + 10% Rh = 100% Pt) thermocouple, free end of which is at a constant temperature 0° , and the other working end is subjected to a temperature t_0 . Author

43/49T104

USSR/Physica (Contd) Apr 49

developed a refinement of the formula expressing relation between temperature and emf ($e_t = a + bt + ct^2$), where constants a, b , and c are determined according to solidification points of antimony, silver, and gold.

43/49T104

PHILIPCHUK, B. I.

13-66. Interpolation formulas for platinum resistance thermometers and platinum-rhodium vs. platinum thermocouples. (In Russian.) B.I. Philipchuk. Zhurnal Tekhnicheskoi Fiziki (Journal of Technical Physics), v. 19, June 1949, p. 667-672.

Formulas for calibration.

immediate source clipping

FILIPCHUK, B. Z.

"The Clinical Characteristics and Surgical Treatment of Patients Suffering From Endemic Goiter Disease." Cand Med Sci, L'vov Medical Inst, L'vov, 1954. (RZhBiol, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

FILIPCHUK, B.Z., kandidat meditsinskikh nauk (L'vov)

Retrosternal goiter. Probl. endokr. i gorm. 1 no.5:115-120 S-0
'55. (MLRA 8:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav.--prof. G.G.
Karavanov) L'vovskogo meditsinskogo instituta (dir.--prof.
L.N.Kuzmenko)

(GOITER,
retrosternal)

FILIPCHUK, B.Z., kandidat meditsinskikh nauk (L'vov, ul. Shashkevicha, d.1, kv.7)

Stand for surgical operations on the neck. Nov.khir,arkh. no.2:80
Mr-Ap '57. (MLRA 10:8)

1. Kafedra fakul'tetskoy khirurgii (sav. - prof. G.G.Karavanov)
L'vovskogo meditsinskogo instituta
(SURGICAL INSTRUMENTS AND APPARATUS)

FILIPCHUK, E.G.

A case from my practice. Fel'd. i akush. no.9:36 S '55.
(TONSILS--DISEASES) (MLRA 8:11)
(ULTRAVIOLET RAYS--THERAPEUTIC USE)

KOSTETSKIY, B.I., doktor tekhn.nauk, prof.; FILIPCHUK, I.K.

Oxidizing wear of surfaces due to rolling friction. Vest.mashinostr.
42 no.6:29-31 Je '62. (MIRA 15:6)

(Mechanical wear)

FILIPCHUK, L.A. (Chimkent); MUZYKA, S.F., (Chimkent)

Field experiments with sagging soils. Osn., fund. i mekh.
grun. 5 no.5:10-13 '63. (MIRA 16:10)

FILIPCHUK, V.I., BOTVINNIK, L.M. (Minsk)

A case of alopecia totalis treated with ACTH. Probl.endok. 1 gorn.
4 no.2: 107 Mr-Ap '58 (MIRA 11:5)

(ACTH, therapeutic use
alopecia totalis (Rus))
(ALOPECIA, therapy
ACTH in total case (Rus))

9-12 / ПЧУК, Ye. V.

FILIPCHUK, Ye. V.

Four-pole systems used for the determination of A-C signal velocity modifications. Sbor.nauch.rab. Mekh.inst. no.3:115--124 '52.
(Automatic control) (Electric controllers) (MLRA 8:3)

FILIPCHUK, Ye. V.

"Graphical Analytical Method for the Investigation of a Relay Sewosystem,"

Dissertation for the Degree of Candidate of Technical Sciences, defended at
Moscow Institute for Mechanics, 30 June 1953) (Elektrichestvo, 1958,
Nr 4, pp. 88-89)

FILIPCHUK, Ye. V.

28(1)

24

PHASE I BOOK EXPLANATION

39
SOV/28

Moscow. Inzhenerno-fizicheskiy institut

Avtomatika i telemekhanika; obzornik stat'ey (Automatic and
Telemechanics; Collection of Articles) Moscow, 1961. 110 p.
3,000 copies printed.

Resp. Ed.: Ye. V. Filipchuk, Candidate of Technical Sciences, Docent;
Tech. Ed.: R. A. Negrimovskaya.

PURPOSE: This collection of articles is intended for engineers and
scientific personnel employed in the field of automatic and
remote control and other related areas.

COVERAGE: This collection contains articles by the staff of the
Chair of Automatic and Remote Control, Moscow Institute of
Engineering and Physics. The subject of each article is amplified
in the Table of Contents. According to the editor, these works
have a definite scientific and practical value. No personalities
are mentioned. References appear after each article.

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Automation and Telemechanics (Cont.)

34
80/15

TABLE OF CONTENTS:

Volkov, N. P. Linear Theory of Frequency Modulation of an Oscillator With Two Feedbacks

The linear theory of an oscillator with two feedbacks, developed by the author, enabled him to form general equations of frequency modulation resulting from the change of parameters of the auxiliary feedback. These equations make possible a comparatively simple and accurate calculation of frequency changes. The condition of optimal tuning of the oscillator permits designing and adjusting the system properly, resulting in maximum accuracy and sensitivity of the instrument. An oscillator with two feedbacks has a great practical value, according to the author. It can be used in circuits designed for precise measurement of small d-c and voltage signals emanating from various non-electrical sources (pressure, temperature, displacement, acceleration, etc). There are 4 references: 3 Soviet (including 1 translation) and 1 English. There are 9 diagrams and drawings. No personalities are mentioned.

Card 2/8

Automation and Telemechanics (Cont.)

SOV/2834

Topcheyev, Yu. I. Stability of Synchro-Servosystems With Overcompensated Electromechanical Amplifiers

21

The author finds that the application of overcompensated rotating power amplifiers in synchro-servosystems ensures sufficient phase and modulus stability and maintains high system accuracy under the action of considerable load moments on the electric motor of the system drive. An example of calculation of a synchro-servomechanism with positive feedback, caused by the overcompensation of the rotating amplifier, is presented. Schematic diagrams of the investigated system and characteristic curves of the various system components are given. From the stability analysis of the system at various degrees of amplifier compensation, amplitude and phase frequency response characteristics are developed for the open internal circuit of the system. The author then constructs logarithmic characteristics for the system transfer function and plots them on a nomographic chart.

Card 3/8

Automation and Telemechanics (Cont.)

SOV/2834

He repeats this for all the system circuits. There are 15 diagrams and 3 references: 2 Soviet, and 1 English. No personalities are mentioned.

Filipchuk, Ye. V. Analysis of a Reactance Measuring Device

45

The author evaluates the importance of the sensitivity of a reactance measuring circuit equipped with a differentiator and a ratiometer. He also studies the problems of dynamics of such a system. On the basis of analysis, recommendations are made for reducing dynamic error. There are 3 references, all English, and 2 diagrams. No personalities are mentioned.

Vinogradov, D. K. Design of an A-C Bridge Circuit With an Inductance Pickup

50

The author investigates conditions of maximum sensitivity of an a-c bridge circuit with inductance pickup with regard to the type of circuit and parameters of the bridge and data transmitter. The unbalanced a-c bridges with reactance and inductance pickups have had widest application in automatic and remote control systems. Accurate

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Automation and Telemechanics (Cont.)

SCV/2834

calculation of such bridge circuits and also of inductance pickups is difficult, however, not essential, since in practice in the overwhelming majority of cases, optimum operating conditions of the system are utilized, and limitations on the selection of its parameters are imposed. The author presents methods used for designing an inductance pickup and the other components of the bridge circuit with respect to given measuring conditions and to the type of measuring device and power source. A numerical example of designing such systems is given. There are 9 Soviet references and 11 drawings and diagrams. No personalities are mentioned.

Popov, P. I. Logarithmic Characteristics of Certain Components 85
The author describes certain circuit components and methods of switching them on, which make it possible to obtain output values proportional to the logarithms of input values. The limits of the applicability of logarithms in relation to circuit parameters and to the voltage of the power source are explained. The author presents

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Automation and Telemechanics (Cont.)

SOV/2834

experimentally obtained characteristics of the investigated circuits, in which Soviet-made vacuum tubes, germanium diodes, and selenium rectifiers are used. There are 2 references: 1 Soviet, and 1 English. There are 7 diagrams. No personalities are mentioned.

Pluzhnikov, V. M. Dynamic Characteristics of Ferroelectric Materials

95

The author examines some characteristic curves obtained for a varicap of the VKI-1 type, representing reversible capacitance as a function of the controlling d-c voltage. This "static" characteristic is well-known for several ferroelectric materials; however, if instead of a d-c signal, a rapidly changing voltage is applied at the input of the dielectric amplifier, what the author calls a "dynamic" characteristic is obtained. The author describes a method used to obtain the dynamic characteristics of the VKI-1 type varicap and of other ferroelectrics and attempts to explain the physical nature of the obtained "dynamic effect". There are 6 references: 3 Soviet and 3 English. There are 8 illustrations, oscillograms and diagrams. No personalities are mentioned.

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SOV/2834

Automation and Telemechanics (Cont.)

106

Pluzhnikov, V. M. Grapho-analytical Method of Design of Dielectric Amplifiers

The author studies dielectric amplifiers in which ferroelectric capacitors are utilized for their nonlinear properties useful in amplifying electric signals. According to the author, there are very few satisfactory methods for calculating dielectric amplifiers. Considering the well-known analogy between dielectric and magnetic amplifiers, the author applies some well-established methods for calculating magnetic amplifiers to the problem of calculating dielectric amplifiers. He also describes a grapho-analytical method for calculating single-cycle dielectric amplifiers. This method was first suggested, according to the author, by the Soviet scientist P. L. Kalantarov and was further developed by other Soviet scientists. The method utilizes the volt-ampere characteristics of ferroelectrics. The author studies conditions for obtaining optimum operation of dielectric amplifiers. There are 9 Soviet references.

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Automation and Telemechanics (Cont.)

SOV/2834

(including one translation). There are 7 diagrams.

AVAILABLE: Library of Congress (TJ213.M58)

Card 8/8

JP/jmr
1-22-60

Классификация автоматического регулирования, ч. 11
 Классификация устройств и исполнительных элементов
 (Elements of Automatic Control Systems, pt. 11: Sensing,
 Amplifying and Control Elements) Moscow, Mashgiz, 1959. 722 p.
 (Series: Osnovy avtomaticheskogo regulirovaniya, t 2) Errata
 slip inserted. 13,000 copies printed.

Reviewers: P. F. Galbejev, Candidate of Technical Sciences,
 G. A. Karasev, Doctor of Technical Sciences, P. Klobokov,
 Candidate of Technical Sciences, V. V. Petrov, Candidate of
 Technical Sciences, D. D. Rogozin, Candidate of Technical Sciences,
 Yu. M. Shchegolev, Doctor of Technical Sciences,
 Yu. M. Shchegolev, Doctor of Technical Sciences,
 A. G. Serebriy, Candidate of Technical Sciences, and A. A. Shevryakov,
 Candidate of Technical Sciences; Scientific Eds.: I. M. Vitenberg,
 Candidate of Technical Sciences, A. I. Moldavet, Candidate of
 Technical Sciences, and Yu. Ye. Rusakiv, Candidate of Technical
 Sciences; Ed. of Series: V. V. Soldovnikov, Doctor of Techni-
 cal Sciences, Professor; Eds. of Publishing House: G. F. Polyakov,
 A. G. Mikosov, and G. M. Konovalev; Tech. Eds.: A. Ia. Tichanov
 and T. F. Sobolova; Managing Ed.: For Literature on Machine
 Building and Instrument Construction (Mashgiz): N. V. Pokrovskiy,
 Engineer.

PURPOSE: This book is intended for engineering and scientific
 personnel and for instructors of vtuces concerned with problems
 of automatic control.

COVERAGE: The authors explain the principle of operation of auto-
 matic control elements and servomechanisms. They also discuss
 typical automatic control circuits and present equations of
 motion and static and dynamic characteristics of automatic control
 elements. They describe sensing elements, amplifiers, control
 elements and transducers. The book contains Sections I, II, and
 III of Part 1, Volume II, Principles of Automatic Control. This
 following persons participated in writing the present work: This
 Chapter VIII and paragraphs 8 and 11 of Chapter IV,
 L. S. Gol'dfarb, Doctor of Technical Sciences, paragraphs 1, 2,
 6 and 7 of Chapter II; A. I. Ouzenko, Candidate of Technical
 Sciences, paragraph 1 of Chapter VIII; K. Ye. Dmitriyev,
 Candidate of Technical Sciences, paragraph 2 of Chapter VIII;
 V. A. Kozlov, Candidate of Technical Sciences, paragraph 1 of
 Chapter VIII; G. A. Karasev, Chapter XIV; Yu. M. Shchegolev,
 Candidate of Technical Sciences, Chapter XIV; P. D. Kuznetsov,
 Candidate of Technical Sciences, Chapter XIV; Yu. M. Shchegolev,
 Candidate of Technical Sciences, paragraphs 1-3 of Chapter VIII, 1-3
 of Chapter XIV; and Chapter XIV; D. S. Pol'por, Doctor of
 Technical Sciences, paragraphs 1-3 of Chapter VIII; V. V. Petrov,
 Candidate of Technical Sciences, paragraph 1 of Chapter VIII, 1-3
 of Chapter XIV; M. A. Rozental, Doctor of Technical Sciences,
 Chapter VII; Yu. Ye. Rusakiv, Candidate of Technical Sciences,
 paragraphs 1, 3-5 and 8-10 of Chapter I, paragraphs 2-5, 12, 13
 and 17 of Chapter II, paragraph 3 of Chapter XIII, and Chapter II;
 B. D. Sedukhin, Candidate of Technical Sciences, paragraphs 1 and
 2 of Chapter I; A. G. Serebriy, Candidate of Technical Sciences,
 Chapter V; V. V. Soldovnikov, Candidate of Technical Sciences,
 paragraphs 9-13 of Chapter IV, paragraph 4 of Chapter I, and
 Chapter XI; G. M. Ulanov, Candidate of Technical Sciences,
 paragraph 1 of Chapter II; Ye. V. Filipchuk, Candidate of Techni-
 cal Sciences, paragraphs 6-11, 14-16 and 18-19 of Chapter II;

A. Ye. Kharybin, Candidate of Technical Sciences, Chapter V, and
 V. A. Klobokov, Candidate of Technical Sciences, paragraph 1 of
 Chapter IX and paragraph 1 of Chapter XIII. References appear at
 the end of each chapter.

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21(9)

SOV/89-6-6-12/27

AUTHORS: Popov, P. I., Filipchuk, Ye. V.

TITLE: Devices for Measuring the Stable Period of Nuclear Reactors
(Pribory dlya izmereniya ustanovivshegosya perioda yadernykh reaktorov)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 6, pp 666 - 668 (USSR)

ABSTRACT: In the present "Letter to the Editor" the authors describe two devices for measuring and recording the stable period of reactors. The first device is based on the logarithmic method. Figure 1 shows the circuit diagram which is then described in detail. The diode 6D4Zh denoted with L₁ in the diagram serves as logarithmic element; furthermore, the tubes 6Zh1Zh, 6N2P, 6P1P, and 6N1P are used. The second device dealt with in detail measures the period according to the potentiometric method the precise circuit diagram is shown by figure 4. First, the functioning of the measuring scheme (Fig 2) is discussed and then that of the measuring device of reactivity (Fig 3). The device for measuring the reactor period itself is based on the application of the autopotentiometer EPP-09. A comparison

Card 1/2

Devices for Measuring the Stable Period of Nuclear Reactors

SOV/89-6-6-12/27

of the properties and the characteristic of the two devices described here shows that the device based on the potentiometric method may operate in a smaller neutron flux measuring range. The main drawbacks of these devices consist in their considerable inertia. There are 4 figures and 4 references, 3 of which are Soviet.

SUBMITTED: October 28, 1958

Card 2/2

FILIPCHUK, Ye. V.

S/803/62/000/003/004/012
D201/D308

AUTHORS: Popov, P.I., Terent'yev, V.G. and Filipchuk, Ye.V.

TITLE: Some methods of increasing the reliability of electron tube amplifiers

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Avtomatika i telemekhanika, no. 3, 1962. Sistemy upravleniya yadernymi energeticheskimi ustanovkami, 26-34

TEXT: The authors analyze the following methods: 1) Parallel connection of the main and the standby amplifier, the latter being connected via a summing device utilizing negative feedback. 2) Standby amplifier switching by means of an anode load impedance, applicable to power amplifiers or oscillators with tungsten filaments. 3) A special circuit excluding the variation of gain and load current in the case of failure of heater circuit. Gain variations (with respect to normal gain) and design criteria are discussed. There are 6 figures.

Card 1/1

38444

S/089/62/012/006/007/019
B102/B104

21.1000
26.2240

AUTHORS: Popov, P. I., Terent'yev, V. G., Filipchuk, Ye. V.

TITLE: The safety factor of the emergency shielding system of nuclear reactors

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 497 - 502

TEXT: Some principles of automatic reactor shielding systems and their reliability are considered.. The systems have to meet the following requirements: (1) If the object to be shielded breaks down, the processes taking place therein must be stopped; (2) a breakdown of elements or connecting pieces of the shield must not affect the technical processes. The reliability of such automatic systems can be improved by increasing their safety factor. The reliability with and without reserve is studied simultaneously, using the following quantitative characteristics: the probability $P(t)$ of uninterrupted operation, the probability $Q(t)$ of interruption, and the hazard $\lambda(t)$ of interruption. Interruptions in the shielding systems are regarded as being accidental and independent, and the hazard is considered to be constant. For the i -th element of the

Card (1/2) 3

S/039/62/012/006/007/019
B102/B104

The safety factor of the ...

system one finds $P_i(t) = \exp(-\lambda_i t)$. A distinction is made between dangerous and harmless interruptions in the shielding system. The latter are caused by defects in this system, while the former are due to actual breakdown. Simple shielding systems, shields with coincidence circuit, the connection of spare channels, and systems with reserve are described. The reliability of a system in the most favorable case (P, Q) and in the most unfavorable case (P*, Q*) is characterized by P(1000), Q(1000), P*(1000) and Q*(1000) for 1000 hours of operation each. These values are numerically given for a shielding system with general reserves and for a system with reserves for each element. These systems use electron tubes and semiconductor elements. In addition, a system with increased reliability (coincidence circuit) is described (Fig. 6), for which the following numerical values can be obtained:

	P(1000)	Q(1000)	P*(1000)	Q*(1000)
operation with electron tubes	0.89	0.11	0.79	0.21
operation with semiconductor elements	0.994	0.006	0.97	0.03

There are 6 figures and 3 tables.

Card 2/A 3

80

The safety factor of the ...

006/007/019
BIC/BIC

SUBMITTED: February 2, 1962

Legend to Fig. 5. (ИК) ionization chambers; (K) "contactless" switches;
(Л) logarithmic amplifiers; (А) differentiating amplifiers; (ОН) break-
down detector; (БС) trigger device unit; (П) reversing switch; (С) coincidence circuit; (ЭМ) electromagnet; (K_п) switch

X

Card 3/8 3

FILIPCZAK, F.M.

On the derivative of a discontinuous function. Bul As Pol
math 12 no.9:535-537 '64.

1. Department of Mathematics of the University, Lodz.
Presented by E. Marczewski.

FILIPCZAK, F.M.

On the derivative of a discontinuous function. Col math 13 no.1:
73-79 '64.

1. Lodz University. Submitted July 5, 1962.

FILIPCEZAK, Igor

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and H-26
Their Application. Carbohydrates and Refinement.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 26705

Author : Ciz Karel, Filipezak Igor, Moncl Zdenek, Valter Vladimír
Inst : -
Title : Decolorizing Ionites. II. Experiment Station for the
Study of Decolorizing Ionites.

Orig Pub : Listy cukrovarn., 1957, 73, No 9, 209-213

Abstract : Description of experimental ion-exchanger units at
beet-sugar and refining plants; at the former the
columns are of rubber-lined iron, at the latter --
of Simax glass. Pilot-plant tests were conducted with
Wofatit E, Contranol W291 and Czech-manufactured Ionox
1a and 5a.
Communication I see RZhkhim, 1958, 12734.

Card 1/1

CZECHOSLOVAKIA / Chemical Technology. Carbohydrates H-26
and Their Processing.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79236.

Author : Filipczak, I., Burianek, J.

Inst : Not given.

Title : The Application of Hydrocyclones in the Sugar
Industry. Results of Industrial Experiments.

Orig Pub: Listy cukrovarn., 1958, 74, No 4, 86-88.

Abstract: Results are reported concerning experimental plant testing on a hydrocyclone operation in the purification of lime milk prior to its filtration from sand and juice from a second saturation. The experiments were conducted on the hydrocyclone having a diameter of 100 millimeters and provided with delivery and release spray nozzles. Upon the purification of lime milk at a pressure of approx. 2.5 atm. and various nozzle combinations,

Card 1/3

CZECHOSLOVAKIA / Chemical Technology. Carbohydrates H-26
and Their Processing.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79236.

Abstract: the efficiency of the hydrocyclone reached 139-196 liters/ minute, the volume of the condensed fraction with sand comprised 6.2-4.7% from the total volume of processed material. The removal of sand was complete, thus confirming the suitability of the hydrocyclone for that purpose. In the purification of the juice from a second saturation, after a best selection of nozzles combination, a removal of up to 95% of sediments from the juice was achieved. At the end of the production, the degree of purification declined to 30%. The hydrocyclone at approx 1.5 atm. passed approx. one hectoliter of juice per minute. The introduction of the hydrocyclone into the operating

Card 2/3

62

CZECHOSLOVAKIA / Chemical Technology. Carbohydrates H-26
and Their Processing.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79236.

Abstract: scheme considerably facilitates further process-
ing of juice from the second saturation on fil-
ter presses, especially if this stage unit is
not sufficient. /sufficiently equipped/.

Card 3/3

FILIPCEK

CZECHOSLOVAKIA / Chemical Technology. Chemical Prod- H-25
ucts and Their Applications. Carbo-
hydrates and Their Processing.

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9922.

Author : Filipczak, I., Cihal, K., Stanberg, J.
Inst : Not given.
Title : Polyelectrolytes as Coagulants in the Sugar
Industry. I. Their Application in the Cane
Sugar Industry in Treatment of Process and
Drainage Waters.

Orig Pub: Listy cukrovarn., 1958, 74, No 4, 88-91.

Abstract: An article reviewing properties of synthetic
polyelectrolytes (PE). Rates of PE are indi-
cated for agricultural improvement of soil
structure, for purifying process and drinking
water, waters from hydrotransporters and wash-

Card 1/2

CZECHOSLOVAKIA / Chemical Technology. Chemical Prod- H-25
APPROVED FOR RELEASE to 06/13/2000 or An CIA-RDP86-00513R000413110006-5"
hydrates and Their Processing.

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9922.

Abstract: waters; on addition of 0.1% PE purification of
waters reached 100%, which was verified in Czech-
oslovakia in 1957. The successful industrial ap-
plication of PE is noted in purifying sugar cane
juices; application of PE within the range of
0.4-2.0 mg% increased the rate of clarification
80-fold, and the volume of the precipitate was
decreased by 50%. Preliminary experiment with
Czechoslovakian PE (VUSPL from Pardubitz plant)
confirmed the marked effectiveness of PE for
purification of juices in beet-sugar plants, es-
pecially when poorly filtering products are hand-
led and for precipitating poorly soluble Ca salts
in the diffusion juice. -- N. Bakanov.

Card 2/2

32569

S/569/61/006/000/004/008
D251/D303

26. 2260

AUTHORS: Filipczak, N., Filipczak, W., and Zeliński, T. (Poland)

TITLE: A method of mathematical simulation of physical processes without limiting the region of variation of the parameter and its application to the question of automatic regulation of nuclear reactors

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Trudy. v. 6. Avtomatizatsiya proizvodstvennykh protsessov; khimiya, neftepererabotka, teploenergetika, yadernaya energetika, metallurgiya. Moscow, 1961, 374-383

TEXT: The paper describes a new method for the automatic variation of scale in a continuous action computer at the moment of transition of the parameter beyond the limits of the given region. The method is based on the variation in the determined relative load on a model by means of matched condensers. The principle of the scheme is shown in Fig. 1. The load of the condenser C_1 is varied
Card 1/3

32569
S/569/61/006/000/004/008
D251/D303

A method of mathematical ...

by the momentary inclusion in the circuit of the parallel condenser C_1'' . The load is thus reduced α times where $\alpha = (C_1' + C_1'')/C_1''$.

Application of the method to analysis of the triggering process of a hot neutron nuclear reactor is considered. Full kinetic equations and circuit diagrams are given, together with the curves for the triggering process of the BBPC(VVRS) reactor. In conclusion the authors thank J. Latour for his assistance. A discussion followed, in which the following took part: G. Veil, V. Ya. Kogan and W. Filipczak. There are 6 figures and 2 Soviet-bloc references. ✓

Card 2/3

32569

A method of mathematical ...

S/569/61/006/000/004/008
D251/D303

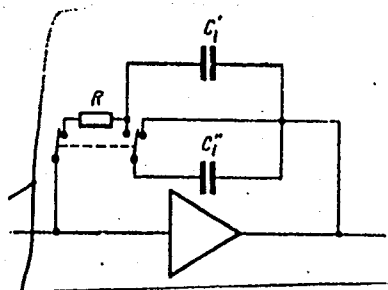


Fig. 1

Card 3/3

FILIFCZAK, Tadeusz, architekt

Progress, a theme at the seminar of the Association of Architects of the Polish Republic. Architektura Pol no.2:45-46 '62.

1. Członek Komitetu Redakcyjnego miesięcznika "Architektura."

32569

S/569/61/006/000/004/008
D251/D303

26. 2260

AUTHORS: Filipczak, N., Filipczak, W., and Zeliński, T. (Poland)

TITLE: A method of mathematical simulation of physical processes without limiting the region of variation of the parameter and its application to the question of automatic regulation of nuclear reactors

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Trudy. v. 6. Avtomatizatsiya proizvodstvennykh protsessov; khimiya, neftepererabotka, teploenergetika, yadernaya energetika, metallurgiya. Moscow, 1961, 374-383

TEXT: The paper describes a new method for the automatic variation of scale in a continuous action computer at the moment of transition of the parameter beyond the limits of the given region. The method is based on the variation in the determined relative load on a model by means of matched condensers. The principle of the scheme is shown in Fig. 1. The load of the condenser C_1 is varied

Card 1/3

32569
S/569/61/006/000/004/008
D251/D303

A method of mathematical ...

by the momentary inclusion in the circuit of the parallel condenser C_i'' . The load is thus reduced α times where $\alpha = (C_i' + C_i'')/C_i''$. Application of the method to analysis of the triggering process of a hot neutron nuclear reactor is considered. Full kinetic equations and circuit diagrams are given, together with the curves for the triggering process of the BBPC(VVRS) reactor. In conclusion the authors thank J. Latour for his assistance. A discussion followed, in which the following took part: G. Veil, V. Ya. Kogan and W. Filipczak. There are 6 figures and 2 Soviet-bloc references. ✓

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32569

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D251/D303

A method of mathematical ...

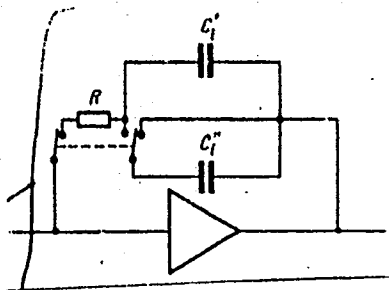


Fig. 1

Card 3/3

FILIPCZAK, Wieslaw

Nuclear reactor start-up simulator. Nukleonika 6 no. 6:387-398. '61

1. Institut yadernykh issledovaniy PAN, Varshava, Otdeleniye reaktornoy tekhniki.

FILIP CZUK
POLAND/Analysis of Inorganic Substances

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19553

Author : Eugeniusz Michalski, H. Filipczuk

Inst : Lodz University

Title : Electrometric Determination of Salts of Mono-valent Mercury by Method of Polarizing One of Electrodes.

Orig Pub: Zesz. Nauk. Univ. Lodzkiego. Nauki Matem. Przyrodn., 1955, No 1, 135 - 143.

Abstract: The salts of $Hg(1+)$ are determined by the method of reversed titration of a known quantity of KI by the analysed solution of the $Hg(1+)$ salt. The titration end is estimated by the disappearance of the current in the circuit caused by the

Card 1/3

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POLAND/Analysis of Inorganic Substances

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19553

polarization of the indicator electrode (IE) in consequence of the elimination of the depolarizing ions I^- . The system consisted of two half-cells: IE and the comparison electrode (CE) connected with an electrolytic switch with a saturated solution of KNO_3 and of an galvanometer, sensitivity 1.9×10^{28} a. IE and CE were made of Pt wire 0.5 mm in diameter and about 3 mm long. IE was submerged in the solution of KI, and CE was submerged in the solution of $Hg_2(NO_3)_2$, the concentration of which did not influence the determination result. The above system does not need any additional current source. The average errors of determination were: at 0.1 n. solution of

Card 2/3

- 37 -

FILIPCZUK, Henryk

Comparison of the accuracy of amperometric methods used for titration of mercurous compounds. Nauki matematyczne Lodz no.10:185-189 '61.

1. Department of Inorganic Chemistry, University, Lodz.

Polish Technical Abstracts
No. 4, 1953
Other Branches of National
Economy, Miscellaneous

2331

③ Physics

331.933:623.347.2.001

Matecki L., Filipczyński L. Functional Absorbers - Theory of Operation and Results of Experimental Research.

„Pochłaniaczo przestrzenna — teoria ich działania i wyniki badań doświadczalnych”. (Prace Cent. Inst. Ochrony Pracy No. 277). Warszawa, 1952, PWT, 13 pp., 16 figs.

The functional absorber — a new type of sound absorbing system. It is, essentially, a body the surfaces of which have the faculty of absorbing acoustic power. Moreover, certain types of absorbers also avail themselves of the resonance phenomenon. The authors deal with the theory of functional absorbers, and the results of adopting such absorbers for use on a laboratory scale. Theoretical considerations and measurements show that the absorption factors amount to values higher than one.

FILIPCZYNSKI, L.

POLAND/Acoustics - Ultrasonics

J-4

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 4122

Author : Filipczynski Leszek
Inst : Institute of Basic Technical Problems, Poland
Title : Radiation of Acoustic Waves for Pulse Ultrasonic Flaw De-
tection Purposes

Orig Pub : Proc. II. conf. ultrason., 1956. Warszawa, PWN, 1957,
29-34

Abstract : The author analyzes the directivity pattern of an ultrasound radiator in the form of a round disk of radius a when operating in the pulsed mode. The directivity pattern changes during the process of establishment of the oscillations, so that not all the waves radiated by the elementary surfaces of the ultrasound source have a chance to reach a given point in space. Taking into account the retardation of the elementary waves, the author determines graphically the transient directivity patterns for $a = 2 \lambda$ during the instant of time $t = T/12, T/4, T/2$ and T to infinity (T is

Card : 1/2

POLAND/Acoustics - Electroacoustics and Technical Acoustics

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 4145

Author : Filip czynski Leszek
Inst : -
Title : Properties of the X-Cut Quartz Transducer Loaded with A Solid
Medium

Orig Pub : Proc. II conf. ultrason., 1956, Warszawa, PWN, 1957,
35-47

Abstract : Experimental research was prrformed on an electromechanical x-cut quartz transducer, operating in the pulse mode at a frequency of 4 Mcs and loaded on one end by a solid medium through a thin layer of oil. The transient and the frequency characteristics of the transducer are considered, and the dependence of these characteristics on the thickness of the intermediate layer is also investigated. The results of the investigation confirm the theoretical calculations for this transducer, published earlier by the author (Elektrika, 1955, No 8.). K.S. Aleksandrov

Card : 1/1

POLAND/Acoustics - Ultrasonics

J-4

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6580

Author : Chindelewicz Andrzej, Filipczyński Leszek
Inst : Technical University, Warsaw
Title : Miniaturized Ultrasonic Flaw Detector DI-9

Orig Pub : Proc. II conf. ultrason., 1956, Warszawa, PWN, 1957, 249-250

Abstract : The instrument is intended for detection of flaws in difficulty-accessible machine parts, welding seams, or boilers. It consists of an indicator block and a power supply which are structurally independent of each other, and which are interconnected during operation with a ten-meter cable. The indicator block weighs 5 kg and measures 16 x 19 x 25 cm. If necessary it can be suspended on the chest of the operator. In addition, the instrument can be used as a stationary laboratory ultrasonic flaw detector. It is provided with the necessary probe heads for the control of articles by longitudinal and transverse waves. The operating frequencies are 15 to 3 mc. The high resolution is attained thanks to the

Card : 1/2

POLAND/Acoustics - Ultrasonics

J-4

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6580

high sensitivity of the amplifiers (120 kh). The localization of the defect is facilitated by distance markers that alternate at every 20 cm. -- M.V. Tsalyak

Card : 2/2

80

POLAND/Acoustics - Ultrasonics

J-4

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6581

Author : Filipczynski L., Grzenkiewicz I.
Inst : Institute For Basic Technical Problems, Poland
Title : Ultrasonic Concrete Tester BI-2

Orig Pub : Proc. II conf. ultrason., 1956. Warszawa, PWN, 1957, 251-252

Abstract : The instrument is intended for the determination of elastic constants of concrete and to estimate its strength without destruction of the tested specimens or construction elements. The desirable reading accuracy is attained through the use of a delay circuit, which makes it possible to broaden any part of the sweep over the entire screen of the oscilloscope. The measurement accuracy is ± 0.5 microsecond, in an interval from 0 to 2000 microseconds. Provision is made for marking the range of measurement (50 to 1,000 kcs) at intervals of 10 and 100 microsecond duration. The lower frequencies are used for measurements with larger elements, and the higher frequencies are used for small laboratory specimens. The

Card : 1/2

87

FILIPCZYNSKI, L.

TECHNOLOGY

PERIODICAL: POMIARY, AUTOMATYKA, KONTROLA. Vol. 4, No. 7, July 1958.

FILIPCZYNSKI, L. Apparatus and technique of supersonic measurements in Poland.
p. 321.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 4,
April 1959, Unclass.

FILIPCZYNSKI, LESZEK

~~PHYSICIST, M.A.~~

35

PHASE I BOOK EXPLOITATION POL/5981

Symposium on Electroacoustic Transducers. Krynica, 1958

Proceedings of the Symposium on Electroacoustic Transducers [held in] Krynica, 17-26 September, 1958. Warsaw, Panstwowe Wydawnictwo Naukowe, 1961. 442 p. Errata slip inserted. 630 copies printed.

Sponsoring Agency: Polish Academy of Sciences. Institute of Basic Technical Problems.

Ed. in Chief: Janusz Kacprowski, Doctor of Sciences; Editing Committee: Ignacy Malecki, Professor, Doctor of Sciences; Wincenty Pajowski, Doctor; and Jerzy Wehr, Master of Sciences; Secretary: Juliusz Mierzejewski.

PURPOSE: This book is intended for physicists and acoustical engineers.

COVERAGE: The book is a collection of detailed research papers constituting the proceedings of a conference held in Krynica from 17 to 26 September 1958 under the auspices of the Institute of Technical Problems, Polish Academy of Sciences.

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Symposium on Electroacoustic Transducers

POL/5981

The following basic problems are treated: 1) theoretical research on energy transformation processes; 2) experimental development of new types of transducers; 3) electroacoustic measurements; 4) technology of piezoelectric and magnetostrictive materials; 5) construction of transducers for technical needs; and 6) design of acoustical transducer systems. No personalities are mentioned. References (if any) follow the individual articles.

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Symposium on Electroacoustic Transducers

POI/5981

2. Symbols and models for mechanical systems. L. Cromor	23
3. Dual forms of four-pole equations and four-pole equivalent circuits of electromechanical transducers. Janusz Kacprowski	33
4. Equivalent circuits for material-active electromechanical (piezoelectric, electrostrictive, magnetostrictive) transducers in non-quasi stationary vibrations. F. A. Fischer	49
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6. Electrical equivalent circuit of the piezoelectric transducer. <u>Leszek Filipczynski</u>	75
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8. Analysis of the equivalent circuit of the magnetostrictive transducer. Roman Suwalski	93
9. A method of calculating transients in nonlinear transducers. Jozef Tabin	101
10. Electrodynamic transducer utilizing displacement currents in dielectrics with high dielectric permeability. V. S. Grigor'yev, L. N. Nikitina, and J. [sic] A. Ukhanov	105

Card 3/8

S/058/62/000/002/011/053
A058/A101

AUTHOR: Filipczyński, L.

TITLE: Scattering of a plane longitudinal wave from a free surface of a disc in solid medium

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1962, 38, abstract 2G289
("Proc. Vibrat. Probl. Polish Acad. sci.", 1961, v. 2, no. 1, 29-39, English, Polish and Russian summaries)

TEXT: The author solves the problem of the diffraction of a plane harmonic longitudinal wave on a disc cavity with radius a in a solid homogeneous isotropic, ideally elastic medium. The wave impinges normal to the surface of the cavity. The disc cavity is idealized as that of an ellipsoid of revolution, whose major semi-axes are equal to a while the third tends toward zero. For describing the incident and diffracted fields, scalar and vector potential of displacement are introduced. The solution is carried out in elliptical coordinates, making it possible not only to write down in simple form the conditions for absence of stresses on the surface of the cavity, but also to separate variables in the motion equations. The incident and diffracted waves are represented as infinite

Card 1/2

Scattering of a plane longitudinal wave ...

S/058/62/000/002/017/053

A058/A101

spherical wave function series. The appropriate expansion coefficients are determined from boundary conditions. General expressions for the diffracted field are obtained. For the case when the length of the incident wave is much greater than the diameter of the cavity, these expressions are analyzed and the effective scattering diameter, as well as the scattering diagram in a plane perpendicular to the surface of the cavity, are calculated. It follows from the scattering diagram that the dependence of the scattered-wave amplitudes on angle θ between the direction of scattering and the direction of the incident longitudinal wave has the form $\cos \theta$ for longitudinal waves and $\sin \theta$ for transverse waves. ✓

I. Viktorov

[Abstracter's note: Complete translation]

FILIPCZYNSKI, Leszak

Ignacy Malecki, member of the Polish Academy of Sciences. Nauka polska
10 no.2:67-70 '62.

1. Polska Akademia Nauk, Komisja Nieniszczacych Metod Badania
Materiałow, Warszawa

FILIPCZYNSKI, Leszek

Propagation of ultrasonic waves in spirals. Proceed vibr probl 3 no.3:
241-251 '62.

1. Department of Vibrations, Institute of Basic Technical Problems,
Polish Academy of Sciences, Warsaw.

FILIPCZYŃSKI, Leszek

Application of ultrasonics in research on matter. Nauka polska 10
no.4:124-125 '62.

1. Polska Akademia Nauk, Instytut Podstawowych Problemow Techniki,
Warszawa.

FILIPCZYNSKI, Leszek

The field of elastic waves radiated into a semispace by a
compressional source. Proceed vibr probl 4 no.1:17-25
'63.

1. Department of Vibrations, Institute of Basic Technical
Problems, Polish Academy of Sciences, Warsaw.

FILIPCZYNSKI, Leszek; LIN DZON-MOU

Measurements of internal losses in materials at high-amplitude vibrations and ultrasonic frequencies. Proceed vibr probl 4 no.2:155-174 '63.

1. Department of Vibrations, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

FILIPCZYNSKI, Leszek

Measurements of mode conversion of ultrasonic waves on a solid-solid boundary. Proceed vibr probl 4 no. 3:255-263 '63.

1. Department of Vibrations, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

FILIPCZYNSKI, Leszek

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Measurements of longitudinal and transverse waves radiated by a compressional source into elastic semispace. Proceed Vibr probl 5 no.2:89-93 '64.

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L 05427-61 BWP(k)

ACC NR: AT6032813

SOURCE CODE: PO/0000/66/000/000/0037/0047

AUTHOR: Filipczynski, L. (Warsaw)

29
Bt1

ORG: Department of Vibrations, IBTP Polish Academy of Sciences

TITLE: Generation of transverse waves in solids by compressional sources

SOURCE: Conference on Acoustics of Solid Media, Warsaw, 1964. Proceedings.
Warsaw, PWN, 1966, 37-47

TOPIC TAGS: ultrasonic inspection, transverse wave, ultrasonic measurement, steady state measurement, acoustoelectric measurement, material inspection, transducer, transverse wave generation

ABSTRACT: The author made an effort to fill existing gaps in the methods of ultrasonic inspection of materials by waves from compressional sources (such as transducers). A study and measurements were made of two sources: one with a transducer diameter considerable greater than the wavelength, and the other with a transducer diameter considerably smaller than the wavelength. The conclusion drawn was that the steady state measurement of ultrasonic probes as performed

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L 05427-67

ACC NR: AT6032813

by the author can be useful when testing transducers for the probes, or the damping values of the probes. It is shown that it is practically impossible, however, to calculate the radiated power of pulses as commonly used in the inspection of materials on the basis of acoustoelectric measurements performed in a steady state; this power cannot be measured at the probe's electric terminals. Orig. art. has: 14 figures and 6 formulas.

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OTH REF: 009/

Card 2/2 *HL*

ACC NR: AP6026749

(A)

SOURCE CODE: FO/0035/66/000/009/0257/0259

AUTHOR: Filipczynski, Leszek (Doctor; Engineer; Director); Luty, Waclaw (Dr.; Eng.);
Etienne, Jerzy (Master Engineer)

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ORG: Laboratory for the Passive Applications of Ultrasound of the Institute for the
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Mechanics, Warsaw (Instytut mechaniki precyzyjnej)

TITLE: Testing fatigue strength by the ultrasound method

TOPIC TAGS: fatigue strength, fatigue test, ultrasound absorption, ultrasonics,
ultrasonic sensor, structural steel, bearing steel / 16H2N2MB structural steel,
IH15 bearing steel

ABSTRACT: The article reports on tests carried out on type 16H2N2MB structural steel
and on type IH15 quenched, low tempered bearing steel which had been smelted by two
different processes: in an arc furnace and terminal deoxidation with the aid of Si
and Al (normal steel) and as above but with vacuum deoxidation in the ladle with the
aid of carbon dissolved in the steel before the addition of Si and Al (vacuum deoxi-
dized steel) in order to determine the effect of the smelting process on the fatigue
strength during vibratory strength compression-stretching. The investigation was
undertaken because the wider application of ultrasound methods using the high power
and high vibration frequency (up to 25 kc) devices for this kind of testing developed
and perfected at the Department for the Design of Prototypes of the Institute of Funda-
mental Technological Problems (Zaklad Konstrukcji Prototypow Instytutu Podstawowych
Problenow) in Poland requires exhaustive testing to determine the effect of high
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vibration frequencies on fatigue strength. These new devices make it possible to shorten test time by 230 times. The comparative testing by the classical method of the steel samples mentioned above makes it possible to determine the scope of applicability of the ultrasound method to fatigue testing. Comparison of the test results in the case of the type IH15 which were obtained by the ultrasound and conventional methods does not exhibit satisfactory agreement. Agreement between the results obtained by the two methods for the type 16H2N2MB steel is considered satisfactory within the limited scope of fatigue strength. Orig. art. has 7 figures and 1 table.

SUB CODE: 11,20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001/

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(A)

SOURCE CODE: FO/0035/66/000/009/0257/0259

AUTHOR: Filipczynski, Leszek (Doctor; Engineer; Director); Luty, Wacław (Dr.; Eng.);
Etienne, Jerzy (Master Engineer)

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ORG: Laboratory for the Passive Applications of Ultrasound of the Institute for the Investigation of Vibrations of the IPPT - Polish AS, Warsaw (Pracownia Biernych Zastosowan Ultradzwiekow Zakladu Badania Drgan IPPT-PAN); Luty - Institute of Precision Mechanics, Warsaw (Instytut mechaniki precyzyjnej)

TITLE: Testing fatigue strength by the ultrasound method

TOPIC TAGS: fatigue strength, fatigue test, ultrasound absorption, ultrasonics, ultrasonic sensor, structural steel, bearing steel / 16H2N2MB structural steel, LH15 bearing steel

ABSTRACT: The article reports on tests carried out on type 16H2N2MB structural steel and on type LH15 quenched, low tempered bearing steel which had been smelted by two different processes: in an arc furnace and terminal deoxidation with the aid of Si and Al (normal steel) and as above but with vacuum deoxidation in the ladle with the aid of carbon dissolved in the steel before the addition of Si and Al (vacuum deoxidized steel) in order to determine the effect of the smelting process on the fatigue strength during vibratory strength compression-stretching. The investigation was undertaken because the wider application of ultrasound methods using the high power and high vibration frequency (up to 23 kc) devices for this kind of testing developed and perfected at the Department for the Design of Prototypes of the Institute of Fundamental Technological Problems (Zaklad Konstrukcji Prototypow Instytutu Podstawowych Problemow) in Poland requires exhaustive testing to determine the effect of high

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ACC NR: AP6026749

vibration frequencies on fatigue strength. These new devices make it possible to shorten test time by 230 times. The comparative testing by the classical method of the steel samples mentioned above makes it possible to determine the scope of applicability of the ultrasound method to fatigue testing. Comparison of the test results in the case of the type IH15 which were obtained by the ultrasound and conventional methods does not exhibit satisfactory agreement. Agreement between the results obtained by the two methods for the type 16H2N2MB steel is considered satisfactory within the limited scope of fatigue strength. Orig. art. has 7 figures and 1 table.

SUB CODE: 11,20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001/

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