

KOVANEV, V.A.; YEZHOV, Yu.S.

Pulmonary edema in heart surgery. Grudn. khir. 5 no. 3:85-89  
My-Je '63. (MIRA 17:1)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof.  
S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev)  
AMN SSSR. Adres avtorov: Moskva V-49, Leninskiy prosp., d. 8,  
Institut serdechno-sosudistoy khirurgii AMN SSSR.

KOVANEV, V.A.; kand. med. nauk; NEZHUKTO, A.Ya.

Pneumonectomy in chronic suppuration of the lung in a patient  
with adrenal gland insufficiency. Khirurgiia no.1:129-132 '63.  
(MIRA 17:5)

1. Iz Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov,  
nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

FINKEL', I.I. [deceased]; KOVANEV, V.A. (Moskva)

Role of the stress reaction in postoperative mortality  
in acquired heart defects. Arkh. pat. 25 no.5:19-26 '63.  
(MIRA 17:2)

1. Iz laboratoriy patomorfologii (zav. - prof. Ya.L.  
Rapoport) i anesteziologii (zav. - dotsent Ye.A. Damir)  
Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.  
Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev)  
AMN SSSR.

KOVANEV, V.A.

Acute adrenal cortex insufficiency after surgical intervention on the heart and lungs. Vest. AMN SSSR 18 no.9:50-57 '63. (MIRA 17:9)

1. Institut serdechno-sosudistey khirurgii AMN SSSR.

KOVANEV, V. A.; KHMELEVSKIY, Ya. M.

"L'influence des differentes substances anesthesiques sur la transmission neuro-musculaire et son interaction avec les myorelaxants nedepolarisants."

report submitted to 3rd World Cong on Anesthesiology, Sao Paulo, Brazil, 20-26 Sep 64.

Inst of Cardiovascular Surgery, Moscow.

KOVANEV, V.A., doktor med.nauk

Significance of adrenocortical hormones (glycocorticoids) in  
modern anesthesia in some intrathoracic interventions. Khirurgiia  
no.10:88-95 '64. (MIRA 18:8)

1. laboratoriya anesteziologii (zav. - doktor med.nauk V.A.Kovanev)  
Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov,  
nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

KOVANEV, V.A.; KIMELEVSKIY, Ya.M.

Some data on the mechanism of the occurrence of the so-called  
recurarization. Eksper. khir. i anest. 9 no.4:80-88 J1-Ag '64.  
(MIRA 18:3)

1. Laboratoriya anesteziologii (zav. - doktor med. nauk V.A.  
Kovanev) Instituta serdechno-sosudistoy khirurgii (dir. - prof.  
S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev)  
AMN SSSR, Moskva.

RAVNOV, A.S., prof.; KOVANEV, V.A., kand. med. nauk; KHMELEVSKIY, Ya.M.;  
VOYNOVA, I.I.

Comparative evaluation of the action of depolarizing and nondepolarizing muscle relaxants in heart surgery. Khirurgiya 40 no.7: 18-23 J1 '64. (MIRA 18:2)

1. Institut serdechno-sosudistoy khirurgii (dir. - zasluzhennyy deyatel' nauki RSFSR prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR, Moskva.



KOVANEV, V.A., doktor med. nauk; YEZHOV, Yu.S., kand. med.nauk (Moskva)

Role of adrenal cortex hormones (glucocorticoids) in the pathogenesis, prevention and treatment of pulmonary edema in mitral stenosis. Sov. med. 27 no.8:31-36 Ag '64.

(MIRA 18:3)

1. Laboratoriya anesteziologii (zav.- doktor med. nauk V.A. Kovanev) Instituta serdechno-sosudistoy khirurgii (dir.- prof. S.A. Kolesnikov) AMN SSSR, nauchnyy rukovoditel' - akademik A.N. Bakulev.

KOVANEV, V.A.; KHEMELEVSKIY, Ya.M.

Effect of anesthetics and some hemodynamic disorders during anesthesia on the neuromuscular transfer of excitation and the action of muscle relaxants. Vest. AMN SSSR no.4:78-86 '65. (MIRA 18:10)

1. Institut serdechno-sosudistoy khirurgii AMN SSSR, Moskva.

KOVANEV, V.A., doktor med.nauk (Moskva)

Current problems of practical anesthesiology. Sov.med.  
28 no.11:144-148 N '65.

(MIRA 18:12)

KOVANEV, V.P.; PARFENOV, A.P.

Effect of hydrocortisone on vascular tone in operations on the heart. Vest. AMN SSSR 15 no. 11:46-54 '60. (MIRA 13:12)

1. Institut grudnoy khirurgii AMN SSSR.  
(HEART—SURGERY) (CORTISONE) (BLOOD VESSELS)

KOVANEVA, R.A.; POKROVSKIY, A.V.

Disorders in the nervous system in aortic coarctation. Grudn.  
khir. 5 no.3:34-40 My-Je '63 (MIRA 17:1)

1. Iz otdeleniya khirurgii sosudov (zav. - prof. Yu.Ye. Berezov)  
Instituta serdechno-sosudistoy khirurgii ( dir. - prof. S.A.  
Kolesnikov) nauchmyy rukovoditel' - akademik A.N.Bakulev) AMN  
SSSR i kafedry nervnykh bolezney II Moskovskogo meditsinskogo  
instituta imeni N.I.Pirogova ( zav. - prof. N.K.Bogolepov).  
Adres Avtorov: Moskva V-49, Leninskiy prosp., d.8, Institut  
serdechno-sosudistoy khirurgii AMN SSSR.

KOVANIC, J. VRBA, S.

A constant-pressure timegear and the unification of the central heating pipes. p.154  
(Pozemni Stavby, Vol.5, no.3, Mar. 1957) Praha

SO: Monthly List of East European Accession (EEAL) LC, Vol.6, no.7, July 1957. Uncl.

KOVANIC, L.

TECHNOLOGY

periodicals: SBORNIK VIDECHYCH PRAC Vol. 2, 1957

KOVANIC, L. Methods of space projection in mining engineering. p.119

Monthly List of East European Accessions (EEAI) LC Vol. 8, no.5  
May 1959, Unclass.

KOV/NIC, Karel

Initial data for designing the U-D20 critical setting control.  
Jaderna energie 9 no.6:201 Je '63.

1. Ustav jaderného výzkumu, Československá akademie věd, Řez u  
Prahy.



KOVANICE, L.

16(1); 18(3); (6);  
22(2); 11(2); 14(5) PHASE I BOOK EXPLOITATION CZECH/2579  
Sborník vědeckých prac vysoké školy technické v Kócišech,  
II, 1957 (Collection of Scientific Works of the Higher  
Technical School in Kóciš, II, 1957) Bratislava, SVTL,  
1957. 198 P. 1,300 copies printed.

Resp. Ed.: Igor Šáčko; Tech. Ed.: P. R. Blažko; Chief Ed.:  
Favol Holický; Engineer.

PURPOSE: This collection of articles is intended for scientists  
and engineers interested in the subjects discussed.

COVERAGE: This collection of 12 articles written by members of  
the faculty of the Kóciš Higher Technical School covers a  
variety of subjects, including mathematical, metallurgy,  
mining engineering, etc. Each article is accompanied by a  
resume in Slovak, Russian, and German. References are  
listed at the end of each article; the majority of listings  
are Slovak, German, and Soviet.

Collection of Scientific Works (Cont.) CZECH/2579

Lovaný, Ludovik. Engineer. Methods of Plotting Under-  
ground Mining Areas  
1. Perspective representation 119  
2. Axonometric (pictorial system of) representation 120  
3. Affine (nonorthogonal) system of representation 123  
4. Vector-space representation 125  
Resume 127  
References 127

Spalšon, František. Professor, Doctor, Engineer (Department  
of Ore and Coal Beneficiation). Mathematical and Graphic  
Evaluation of the Technological Effectiveness of Dressing  
and Beneficiation Processes  
1. Concentration 129  
2. Sorting 137  
3. Exhydration and thickening 137  
Resume 134  
References 139  
149

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KOVANIC, Indovit, doc. inz.

Identification of the position of lost boreholes. Rudy 12  
no. 7/8:245-248 J1-8g'64 (MIRA 17:8)

1. Higher School of Technology, Kosice.

KOVANIC, Ludovit, inz.

Use of artificial magnetic field in the mine survey.  
Sbor VST Kosice 2:159-163 '62.

1. Katedra banskeho meracstva a geofyziky, Vysoka skola  
technicka, Kosice.

KOVANIC, L.

DUDRA, A.

CZECHOSLOVAKIA

no academic degree indicated

Stomatologic Clinic, Medical Faculty, P.J. Safarik University (Stomatologicka  
klinika Lek. fak. Univerzity P.J. Safarika), Kosice; Director: docent RUZICKA A,  
MD; and Department for Occupational Diseases, Internal Clinic, Medical Faculty,  
P.J. Safarik University (Oddelenie pre choroby z povolania Internej kliniky  
Lek. fak. Univ. P.J. Safarika), Kosice; Director: B. GOMPOS, MD.

Bratislava, Bratislavske Lekarske Listy, No 9, Nov 62, pp 535-539.

"The Curve of Mercury Excreted in the Urine as Related to the Length of Occupation  
in Mercury Factory Workers"

Co-authors:

KOVANIC, L. same as above

RIMAROVA, A. " " "

DUDRA, A. [deceased]; KOVANIC, L.; RIMAROVA, A.

The curve of urinary mercury excretion and its relation to the duration of the occupational exposure to mercury by factory workers. Bratisl. Lek. Listy 42 no.9:535-539 '62.

1. Zo Stomatologickej kliniky Lek. fak. Univerzity P.J. Safarika v Kosiciach, veduci doc. MUDr. A. Ruzicka, a z oddelenia pre choroby z povolania Internej kliniky Lek. fak. Univ. P.J. Safarika v Kosiciach, prednosta MUDr. B. Lombos.

(MERCURY POISONING)

(OCCUPATIONAL DISEASES)

TOSOVSKY, V., doc. dr.; STRYHAL, F.; KUBAT, K.; KOVANIC, P.

Contribution to heterotopic ossification (so-called tumor-like ossifying myositis). Acta chir. orthop. traum. cech. 30 no. 5: 406-408 0'63.

I. I. klinika pro ortopedickou a detskou chirurgii fakulty vseobecného lékařství KU v Praze (prednosta prof. dr. M. Jaros);  
Traumatologicke oddeleni detske chirurgicke kliniky fakulty detskeho lékařství KU v Praze (vedouci doc. dr. V. Tosovsky) a  
II. Patologickoanatomicky ustav fakulty vseobecného lékařství KU v Praze (prednosta prof. dr. V. Jedlicka).

\*

KOVANIC, P.; KUBAT, K.; KUBATOVA, A.

Pressure artefacts in the rat myocardium. Cas. Lek. Cesk.  
103 no.17:462-465 Ap 24 '64.

1. II patologickoanatomicky ustav fakulty vseobecneho lekarstvi  
KU [Karlova University] v Praze, (prednosta prof. dr. V. Jedlicka,  
DrSc.) a Histologicka laborator II. gynekologicko-porodnicke  
kliniky fakulty vseobecneho lekarstvi KU [Karlova University] v  
Praze, (vedouci prof. dr. J. Lukas, DrSc).

BERAK, L.; KLIK, F.; KOVANIC, P.

Some results of nuclear research in Czechoslovakia.  
Vestnik CSAV 73 no. 1: 60-64 '64.



KOVANIC, P., inz. CSc.

Controlled thermonuclear reactions, increasing optimism. El  
tech obzor 53 no.8:453-454 Ag '64.

CZECHOSLOVAKIA/Nuclear Physics - Nuclear Power and Technology. C

Abs Jour : Ref Zhur Fizika, No 11, 1959, 24622

Author : Kovanic, Pavel, Kulka, Milan

Inst : -

Title : All Out Automatization of the Control of Nuclear Reactors with the Aid of an Automatically-Controlled Detector.

Orig Pub : Jaderna energie, 1959, 5, No 1, 6-11

Abstract : The authors report the results of experiments carried out with the research reactor of the Czechoslovak Academy of Sciences with new systems of measurement and control of atomic reactors. The purpose of these experiments was a qualitative verification of the possibility of using servomechanisms in the automatization of control and protection of reactors. The results of the experiments have exhibited favorable properties of the new systems.

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- 31 -

KOVANIC, P.

"Solution of the kinetic problems of reactors."

JADERNA ENERGIE, Praha, Czechoslovakia, Vol. 5, No. 6, June 1959.

Monthly List of East European Accessions ( AE), LC, Vol. 8, No. 9, September 1959.

Unclassified.

KOVANIC, PAVEL

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19 19  
 Economics of the production of radioisotopes in uranium reactors. Pavel Kovanic and Milan Kulka (CSAV, Prague). *Jaderna energie* 3, 227-33(1968).—Radioisotopes can be produced in a reactor either internally, when they affect the neutron balance unfavorably, or externally, when they have no effect on the neutron balance. Different factors affect the economics of production in the 2 cases. The effect of the extent of burn-up, which in turn depends on the reactor materials and dimensions, is considered, and it is concluded that production of radioisotopes in reactors using enriched fuel is economically more favorable than in reactors using natural U. Other favorable factors are: a removable reflector, a possibility of changing the shape of the reactor core, a large reserve reactivity, and a large free space around the core, either empty or filled with water. The cost of producing  $10^{20}$  available neutrons (by taking into account fuel, amortization, and production costs) is compared for various types of reactors. H.N.

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38998  
Z/038/62/000/007/001/006  
D409/D301 16

26.2262  
AUTHORS:

Kovanic, Pavel and Haniger, Ladislav

TITLE:

The use of a pulse fission chamber for automatic control of reactor power and period

PERIODICAL:

Jaderná energie, no. 7, 1962, 221 - 224

TEXT:

The article describes test results which prove the applicability and advantages of a pulse fission chamber for the automatic control of reactor power and period. The tests, described in P. Kovanic and L. Haniger (Ref. 2: Výzkum regulace reaktoru pohyblivou impulsní stěpnou komorou (Research on reactor control with a moving pulse fission chamber) ÚJV Paper No. 446 and ZVIL No. Ae 79/Dok), were performed in 1960 on a Czechoslovak VVR-S reactor controlled by a moving pulse fission chamber of the following design: A moving probe - consisting of a pulse chamber (sensitivity 0.12 pulses/sec/neutron-flux unit) and a pre-amplifier - was suspended in the vertical reactor channel; pulses derived from the pre-amplifier were amplified further by an 80 dB broad-band amplifier, and their frequency measured by a linear

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The use of a pulse fission chamber ...

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integrator with an adjustable time constant; the integrator output was connected to the comparator of a regular reactor control system, and the output voltage of the latter was again amplified (amplidyne) and fed to the control-rod drive. The applicability of this control system was tested and verified at constant reactor power which could be maintained with sufficient accuracy, especially when integrator-time constant  $< 0.5$  sec were chosen. The influence of gamma radiation on the control-system operation could reliably and completely be suppressed even under most unfavorable conditions; also the operating range of reactor power and period control could considerably be expanded. A further expansion can be expected by using a more sensitive pulse chamber. An actual, fully automatic reactor control system, using a moving pulse fission chamber, has already been developed with the aid of the described tests. The author gives credit to Milan Pospíšil of the ZVIL Works and to Milan Capek of the ÚJV in Řež. There are 4 figures. (Technical Editor: K. Wagner)

ASSOCIATION: Ústav jaderného výzkumu ČSAV, Řež (Nuclear Research Institute, Czechoslovak AS, Řež) (P. Kovanic);

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2/938/62/000/008/006/007

**AUTHORS:** Kovanic, P., Rygl, J., Malanik, A., Wagner, K., Teska, J.

**TITLE:** The device for automatic control of nuclear reactor in Rež, Czechoslovakia

**PERIODICAL:** Jaderna Energie, no. 8, 1962, 285

**TEXT:** The described device controls its own ability for starting the reactor, the start of the reactor from subcritical state to the given power, power changes to given value, further the device controls whether

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KOVANIC, Pavel; HANIGER, Ladislav

Use of the pulse fission chamber for automatic control of reactor power and period. *Jaderna energie* 8 no.7:221-224 JI '62.

1. Ustav jaderného výzkumu, Československá akademie věd, Rez (for Kovanic). 2. Zavody V.I.Lenina, Plzeň (for Haniger).



Z/038/62/000/012/001/001  
D236/D308

AUTHORS: Kovanic, Pavel and Rygl, Jaroslav

TITLE: Neutron probe with pulsed fission chamber and ferrite transformer

PERIODICAL: Jaderná Energie, no. 12, 1962, 427-428

TEXT: The probe was developed at the ÚJV ČSAV, for fully automated control of the reactor. The basic principles of the probe were previously described by P. Kovanic and M. Kulka, (Atomnaya energiya, v. 5, no. 10, 1958, 403). The fission chambers operate at constant neutron flow of  $2.7 \times 10^5$  n/cm<sup>2</sup>s, independent of the reactor performance. The sensitivity of the chamber is 0.15 pulses per unit of neutron flow, its diameter is 44 mm. There are 3 figures.

ASSOCIATION: Ústav jaderného výzkumu ČSAV (Institute of Nuclear Research, Czechoslovak AS)

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AUTHOR: Kovanic, Pavel

TITLE: Conditions of application for the transfer functions of a reactor

PERIODICAL: Atomnaya energiya, v. 12, no. 2, 1962, 123 - 128

TEXT: From the kinetic reactor equations

$$\frac{dN}{dt} = \frac{\Delta k(t) - \sum_{i=1}^{i=m} \mu_i}{T_0} N + \sum_{i=1}^{i=m} r_i \lambda_i + Q, \quad (1)$$

$$\frac{dr_i}{dt} = \frac{\mu_i}{T_0} N - r_i \lambda_i, \quad (2)$$

$i = 1, 2, \dots, m.$

the equivalent transfer function is derived, which is valid for any  
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Conditions of application for the...

given change of the output function  $\delta n(t) = a \sin \omega t$ .

$\delta n(t) = \frac{N(t) - N_0 \exp(\alpha t)}{N_0 \exp(\alpha t)}$ ,  $a$  and  $\omega$  are constants. For the input function

$\delta k(t) = \Delta k(t) - \Delta k_0$ ,

$$\begin{aligned} \delta k(t) = & \sum_{i=1}^m \frac{\mu_i \lambda_i \omega^2}{(\lambda_i + \alpha)^2 + \omega^2} \frac{a \sin \omega t}{1 + a \sin \omega t} + \\ & + \left[ \omega T_0 + \sum_{i=1}^m \frac{\mu_i \lambda_i \omega}{(\lambda_i + \alpha)^2 + \omega^2} \right] \frac{a \cos \omega t}{1 + a \sin \omega t} - \frac{Q T_0 \exp(-\alpha t)}{N_0} \frac{1}{1 + a \sin \omega t} \quad (7) \\ & - \sum_{i=1}^m \left[ \frac{\lambda_i r_{i0} T_0}{N_0} - \frac{\mu_i \lambda_i}{\alpha + \lambda_i} + \frac{a \mu_i \lambda_i \omega}{(\lambda_i + \alpha)^2 + \omega^2} \right] \frac{\exp(-\alpha t - \lambda_i t)}{1 + a \sin \omega t}, \end{aligned}$$

is obtained;  $\Delta k_0 = \alpha(T_0 + \sum_{i=1}^m \mu_i / (\lambda_i + \alpha))$ ,  $r_{i0} = [r_i(t)]_{t=0}$ . An

equivalent transfer function should be introduced if the purely periodic components play a main role in (7). Four cases in which this occurs are Card 2/7

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Conditions of application for the...  
discussed.

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	Source	Time	Main power component	State of reactor
$\alpha=0$	$\rho \neq 0$	$t_1 < t$	const.	subcritical
$\alpha=0$	$\rho = 0$	$t_2 < t$	const.	critical
$\alpha > 0$	$\rho$ small	$t_3 < t$	exponentially in- creasing	supercritical
$\alpha < 0$ $\alpha + \lambda_i > 0$ for all $i$	$\rho$ small	$t_4 < t < t_5$	exponentially de- creasing	subcritical

If such a condition is fulfilled,  $\delta k_{per}(t)$  for the periodic component can be expanded into a Fourier series and the first harmonic  $\delta k_1(t)$  and the constant component  $\delta k_0$  can be determined;

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Conditions of application for the...

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$$\begin{aligned} \delta k_1(t) = & \frac{2}{a} \left[ \frac{1}{\sqrt{1-a^2}} - 1 \right] \sum_{i=1}^m \frac{\mu_i \lambda_i \omega^2}{(\alpha + \lambda_i)^2 + \omega^2 (\alpha + \lambda_i)} \cdot \sin \omega t + \\ & + \frac{2}{a} [1 - \sqrt{1-a^2}] \left[ \omega T_0 + \sum_{i=1}^m \frac{\mu_i \lambda_i \omega}{(\alpha + \lambda_i)^2 + \omega^2} \right] \cdot \cos \omega t + \\ & + \left\langle \frac{2}{a} \left( \frac{1}{\sqrt{1-a^2}} - 1 \right) \frac{QT_0}{N_0} \sin \omega t \right\rangle; \end{aligned} \quad (10)$$

$$\delta k_0 = \left( 1 - \frac{1}{\sqrt{1-a^2}} \right) \sum_{i=1}^m \frac{\mu_i \lambda_i \omega^2}{(\alpha + \lambda_i)^2 + \omega^2 (\alpha + \lambda_i)} - \left\langle \frac{1}{\sqrt{1-a^2}} \frac{QT_0}{N_0} \right\rangle. \quad (11)$$

The amplification factor  $A_1 = a / (\delta k / \mu)$ , with  $\mu = \sum_{i=1}^m \mu_i$ , for the first harmonic is found to be

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Conditions of application for the...

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$$A_1 = \left\{ \left[ \frac{2}{a^2} (1 - \sqrt{1-a^2}) \left( \frac{\omega T_0}{\mu} + \sum_{i=1}^m \frac{\mu_i}{\mu} \frac{\lambda_i \omega}{(\lambda_i + \alpha)^2 + \omega^2} \right) \right]^2 + \left[ \frac{2}{a^2} \left( \frac{1}{\sqrt{1-a^2}} - 1 \right) \left( \sum_{i=1}^m \frac{\mu_i}{\mu} \frac{\lambda_i \omega^2}{(\alpha + \lambda_i)^2 + \omega^2 (\lambda_i + \alpha)} + \left\langle \frac{QT_0}{\mu N_0} \right\rangle \right) \right]^2 \right\}^{-\frac{1}{2}} \quad (13)$$

and the phase of the equivalent complex amplification factor is given by

$$\varphi_1 = -\arctg \left( \frac{\sqrt{1-a^2} \left( \frac{\omega T_0}{\mu} + \sum_{i=1}^m \frac{\mu_i}{\mu} \frac{\omega \lambda_i}{(\alpha + \lambda_i)^2 + \omega^2} \right)}{\sum_{i=1}^m \frac{\mu_i}{\mu} \frac{\lambda_i \omega^2}{(\alpha + \lambda_i)^2 + \omega^2 (\alpha + \lambda_i)} + \left\langle \frac{QT_0}{\mu N_0} \right\rangle} \right) \quad (14)$$

$|\delta k_1|$  is the amplitude of  $\delta k_1(t)$ . The distortion of the input function curve can be determined from the root-mean-square deviation of the first harmonic and the constant component from the exact input function:

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Conditions of application for the...

$$V_{\xi^2} = \sqrt{\frac{\int_0^{2\pi} (\delta k_{per}(t) - \delta k_0 - \delta k_{\gamma}) dt}{\int_0^{2\pi} \delta k_{per}^2(t) dt}} \quad (16)$$

which can be written as a function of  $\alpha$  and  $\tan \beta$  only. This method of determining the equivalent complex amplification coefficient has several advantages: the ranges of applicability of the elementary transfer functions can be given more accurately and the method can be physically interpreted. An ideal programming reactor period and power controller should vary reactivity in accordance with Eq. (7). The equivalent amplification factor drops as the amplitude of the output function rises. Analytical determination of the parameters of the simplified transfer functions and comparison of the resulting amplitude-frequency characteristics (for  $T_0 = 10^{-4}$ ,  $\alpha = 0$ ) with the precise one calculated in multi-group theory and the approximate one obtained by Skinner and Cohen, show that the characteristic obtained with the formulas in this paper very nearly fit the precise one. A similar result is found for the phase-frequency

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Conditions of application for the...

characteristics. There are 2 figures, 1 table, and 5 references: 1 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: Z. Akcasu. Nucl. Sci. Engng., 2, No. 4, 456, 1956; H. Sandmeier. Nucl. Sci. Engng., 6, 85, 1959; R. Skinner, E. Cohen. Nucl. Sci. Engng., 5, 291, 1959.

ASSOCIATION: Institut yadernykh issledovaniy ChSAN, Praga (Institute of Nuclear Research of the Czechoslovak AS, Prague)

SUBMITTED: May 30, 1961

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KOVANITS, Pavel [Kovanic, Pavel]; RYGL, Yaroslav; VAGNER, Karel [Wagner, Karel]; TESKA, Yosif [Teska, Josef]

New automatic control and safety system of the VVR-S reactor.  
Atom . energ. 13 no.4:350-359 0 '62. (MIRA 15:9)

1. Institut yadernykh issledovaniy, Chekhoslovatskaya Akademiya nauk, Praga (for Kovanits, Rygl). 2. Zavody im. V.I. Lenina, Pl'zen', Chekhoslovatskaya Sotsialisticheskaya Respublika (for Vagner, Teska).  
(Nuclear reactors)

Z/017/62/051/002/003/004  
D291/D301

AUTHOR: Kovanic, Pavel, Engineer, Candidate of Technical Sciences

TITLE: The nuclear reactor as a controlled system

PERIODICAL: Elektrotechnický obzor, v. 51, no. 2, 1962, 70-75

TEXT: The article, largely based on Western sources, deals with problems of reactor control physics. Reactor kinetics, reactor dynamics depending on the reactor state, and special characteristics of the reactor as a controlled system are listed as basic prerequisites for calculating and designing reactor control systems. Simplified expressions are derived for the reactor kinetic equation and the transfer functions of a critical reactor. The Laplace - Wagner transform is used to formulate reactivity-power transfers, and the dependence of these transfers on the reactor state and on the amplitude of deviation from the quasi-steady state are determined as well as their correlations with the initial neutron-power transfer. The reactor is considered a linear system for mere reproduction of neutrons and infringed by feedback, and Card 1/3 ✓

The nuclear reactor ...

Z/017/62/051/002/003/004  
D291/D301

the output of the reactor is controlled by a variation of this feedback. Based on the derived relations, the author discusses the characteristics of a reactor as a controlled system, i.e. possibilities for increasing and reducing the reactor output by varying the reactivity (feedback), and explains some concepts such as reactor period, reactor shut-down, etc. He finally states that the nature of reactor-output changes does not only depend on the reactivity magnitude (position of the control element), but also on the rate of reactivity variation (the speed at which the position of the control element is changed), a fact which facilitates the design of a rapid and precise reactor control system. (Technical Editor: Professor, Engineer, Doctor J. Nekolný, Corresponding Member of the Czechoslovak AS). There are 2 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: M. A. Schultz: Control of nuclear reactors and power plants. McGraw-Hill, New York, London, 1955; S. Barabaschi: Delayed neutrons importens in reactor transfer functions. Energia nucleare, v. 4, no. 5; Z. Akcasu: ✓

Card 2/3

The nuclear reactor ...

Z/017/62/051/002/003/004  
D291/D301

General solution of the reactor kinetic equations without feed-back. Nuclear Science and Engineering (1958), no. 4, pp. 456-467.

ASSOCIATION: <sup>✓</sup>ČSAV (Czechoslovak AS)

SUBMITTED: November 15, 1960

✓

Card 3/3

KOVANIC, Pavel; WAGNER, Karel

Short survey of properties of systems with movable detectors and their development. Jaderna energie 9 no.7:233 J1 '63.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez u Prahy (for Kovanic). 2. Zavody V.I. Lenina, Plzen (for Wagner).

KOVANIC, Pavel, inz., kandidat-technických ved

Swiss experimental nuclear power station. El tech obzor 52  
no.7:382-383 JI '63.

KOVANIC, Pavel; RYGL, Jaroslav

Calculation of the new automatic control and protection system of the VVR-S reactor. Jaderna energie 9 no.6:201 Je '63.

1. Ustav haderneho vyzkumu, Ceskoslovenska akademie ved, Rez u Prahy.

KOVANIC, Pavel; RYGL, Jaroslav; WAGNER, Karel; TESKA, Josef

New system of the VVR-S reactor automatic control. Jaderna  
energie 9 no.6:201. Je '63.

1. Ustav haderneho vyzkumu, Ceskoslovenska akademie ved, Rez u  
Prahy (for Kovanic and Rygl)
2. Zavody V.I. Lenina, Plzen (for Wagner and Teska).



KOVANIC, Pavel

Basic equation of systems with movable detectors for reactor automatic control. Jaderna energie 9 no.6:201 Je '63.

1. Ustav jaderného výzkumu, Československá akademie věd, Řez u Prahy.

WAGNER, K.; KOVANIC, P.

Symposium of International Atomic Energy Agency on the physics  
and material of control rods of nuclear reactors. Jaderna  
energie 10 no. 5:188-190 My '64.

STRYHAL, F.; TOSOVSKY, V.; KUBAT, K.; KOVANIC, P.

Giant-cell tumors of the spine. Acta chir. orthop. traum. cech.  
31 no.1:29-33 F '64.

I. I. Klinika pro ortopedickou a detskou chirurgii fakulty vseobecneho lekarstvi Karlovy University v Praze, (prednosta prof. dr. M. Jaraš); Traumatologicke oddeleni detske chirurgicke kliniky fakulty detskeho lekarstvi Karlovy University v Praze, (prednosta prof. dr. V. Kafka, DrSc., vedouci odd. dr. V. Tosovsky, DrSc.) a II. patologickoanatomicky ustav fakulty vseobecneho lekarstvi Karlovy University v Praze (prednosta prof. dr. V. Jedlicka, DrSc.

KOVANIC, P.

ASEA delivered its first nuclear reactor. El tech obzor 53  
no. 2:105-107 F '64.

L 37255-66 EWT(d) TJP(c)

ACC NR: AP6027880

SOURCE CODE: CZ/0038/66/000/003/0101/0102

AUTHOR: Kovanic, Pavel--Kovanits, P.

26  
B

ORG: Nuclear Research Institute, CSAV, Rez (Ustav jaderneho vyzkumu CSAV)

TITLE: Generalized discrete analogy of the Zade-Ragazzini problem

SOURCE: Jaderna energie, no. 3, 1966, 101-102

TOPIC TAGS: mathematic matrix, statistics, Zade-Ragazzini problem

ABSTRACT: NRI Report No. 1028/65. The paper presents a matrix solution of a generalized discrete analogy of the Zade-Ragazzini problem, and its interrelation with the problem of statistical evaluation of linear forms and with the making of indirect observations is pointed out. The extremal properties of the solution and the equivalence of the two possible approaches to calculation of the required results are demonstrated. The matrix form of solution permits not repeating a large part of the calculations in related problems. The solution is general in the sense that the intervals between the values of the independent variables cannot be constant. The nonrandom component of the input signal can be not only a polynomial but even a more general function. Noncorrelatability of the input random values is not assumed. [JPRS: 36,845]

SUB CODE: 12, 20 / SUBM DATE: none

*1-2*  
Card 1/1

UDC: 519.2: 539.12.075:62-5: 681.324:53

0917 1393

L 45430-66 T/EWP(1) IJP(c)

ACC NR: AP6022421

SOURCE CODE: CZ/0088/66/000/002/0157/0173

9

AUTHOR: Kovanic, Pavel, (Engineer; Candidate of Sciences)

ORG: Institute of Nuclear Research CSAV, Rez near Prague (Ustav jaderneho vyzkumu CZAV)

TITLE: Static programming of data handling

SOURCE: Kybernetiya, no. 2, 1966, 157-173

TOPIC TAGS: data handling, static programming

ABSTRACT: The paper deals with the numerical handling of data. It discusses the method of static programming which consist in splitting the handling process into two stages. In the first stage the digital operators are prepared; in the second stage the operators are applied in the calculation of the scalar product into which the vector-operator and vector of measured values enter. Often a multiple repeat of data processing is necessary. In such instances only the second state is repeated and a minimal number of numerical operations are needed. The method makes

Card 1/2

CZECHOSLOVAKIA

KUBATOVA, A., KUBAT, E., and KOVANIČ, P., with technical co-operation of HCHLEROVA, R., and LYEROVA, O., Second Institute of Pathological Anatomy (II. patologickoanatomický ústav), Faculty of General Medicine (Fakulta všeobecného lékařství), Charles University, Prague, Prof. Dr. V. JEDLIČKA, Dr of Sciences, director; and Histological Laboratory (Histologická laborator), Second Clinic of Gynecology and Obstetrics (II. gynekologicko-porodnická klinika), Faculty of General Medicine (Fakulta všeobecného lékařství), Charles University, Prague, Prof. Dr J. LUKAS, Dr of Sciences, director.

"Morphological Findings in the Heart Muscle of Rats Following a Hypercapnic and Hypoxic Hypothermia to a Rectal Temperature of 1.0 Degree Centigrade"

Prague, Casopis Lekarů Ceských, Vol CII, No 32/33, 16 August 1963, pp 874-880.

Abstract [Authors' English summary]: Female rats (Wistar, own breed) were subject to a hypercapnic and hypoxic hypothermia. Cardiac arrests lasted for at least 25 minutes. Ninety percent of the animals were resuscitated. Small multiple necroses were found in the heart muscle in rats killed after different time intervals. It was found that the severity of changes was proportional to the duration of hypoxia.

1/2

BENES, Josef; KOVANIC, Petr

Pathological finding on a reindeer bone. Cas min geol  
8 no.2:220 Ap '63.

- I. Geologicko-paleontologicke oddeleni Narodniho musea, Praha;
- II. patologicko-anatomicky ustav, lekarska fakulta, Karlova  
universita, Praha.



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24148

Z/034/61/000/008/005/005  
E073/E535

**AUTHORS:** Šlancar, Fr., Engineer and Kovanicová, Věra, Engineer

**TITLE:** High-vacuum furnace for metallographic investigations

**PERIODICAL:** Hutnické listy, 1961, No.8, pp.582-583

**TEXT:** There is generally a shortage of satisfactory designs of laboratory vacuum furnaces permitting the following: rapid achievement of a vacuum of the order of  $10^{-5}$  mm Hg, high accuracy of the temperature setting, possibility of controlling the speed of the temperature rise of the specimen, possibility of choosing various methods of cooling the specimens, reliability in operation and easy maintenance. The authors describe a tubular tilting furnace. It consists of a tilting heating jacket (quartz tube), a furnace, a vacuum distribution system, a control system and a metering system. Fig.2 shows a sketch of the tilting heating jacket which consists of a quartz tube of 30 mm inner diameter 1, which is sealed on one side, whilst on the other side it is conically ground. A maximum temperature of 1100°C can be achieved. The temperature in the quartz tube is monitored by a chromel-alumel thermocouple 3. The specimens are placed onto a molybdenum

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High-vacuum furnace for ...

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E073/E535

trough 2, the smooth surface of which also forms a slide-way for moving the specimens into the cooling medium. On the open end the quartz tube is connected to a brass tilting head 5. A cooling jacket with circulating water 4 is placed near the open end of the quartz tube so as to prevent untightness caused by the high temperature of the quartz tube. The tilting head has several functions, namely, it interconnects the silicon tube, the container with the cooling medium and the vacuum system. The tapered connection between the head and the vacuum system permits tilting the entire heating jacket about its horizontal axis and making the specimen 6 slide into the cooling medium. The thermocouple for measuring the temperature in the active space of the furnace also passes through the tilting head. The glass container for the cooling medium 7 is also connected to the head by means of a tapered ground joint. As a cooling medium substances can be used which have a lower vapour tension than  $10^{-5}$  mm Hg. In the given case silicon oil was used. A sketch of the vacuum system is shown in Fig.3. The active space of the tilting furnace can be connected with the outside atmosphere or with an inert medium by

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High-vacuum furnace for ...

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means of the cock 5. During preliminary evacuation, the rotary pump 2 is connected with the active space by means of the cock 7 and, after reaching a high vacuum, further evacuation is by means of a diffusion oil pump 1 opening the cock 6 and closing the cock 7. This arrangement permits changing the metallographic specimen without interrupting the operation of the vacuum pumps. The combination of the rotary oil pump with a delivery of 7 m<sup>3</sup>/hour with a diffusion oil pump with a delivery of 30 litre/sec permits attaining a vacuum of  $2 \times 10^{-5}$  mm Hg. Fig.3 also shows the tilting heating jacket 3 and the ionization tube 4. The tubular resistance furnace of a maximum output of 1 kW is provided with rollers which rest on guides; this permits moving the heating jacket nearer or further away from the furnace. The furnace can be fixed into any position by means of a push handle. The output of the furnace is semi-automatically controlled by means of a compensation regulator, the circuit diagram of which is shown in Fig.4 (1 - resistance furnace of 1 kW, 2 - thermocouple of the control system, 3 - "compensation drop controller" with holding contacts, 4 and 4a - regulating transformers, 5 and 5a -

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High-vacuum furnace for ...

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E073/E535

voltage relays, 6 - ammeter). The control pick-up is a Pt-Rh-Pt thermocouple placed as close as possible to the heater filament so that the thermal inertia of the system is as low as possible. On connecting the furnace, the regulation transformer 4 is set to pass a current which is required for the given speed of heating of the specimen or is set to a maximum. Switching off and switching on of large current causes considerable thermal fluctuations. Therefore, by connecting the regulating transformer 4a the controlled current is reduced to a value which is just sufficient to compensate thermal losses. As a result of this the temperature fluctuations of the furnace are reduced very effectively. Due to the fact that the heat has to flow through a thermal resistance, a layer of air and the silicon tube, the thermal fluctuations are equalized so that the specimen temperature remains practically constant. The temperature in the active space is recorded by means of a millivoltmeter. Up to  $10^{-3}$  mm Hg a high voltage discharge vacuum meter is used, higher vacuum values are measured by means of an ionization vacuum meter. The description of the apparatus is supplemented by practical instructions on its

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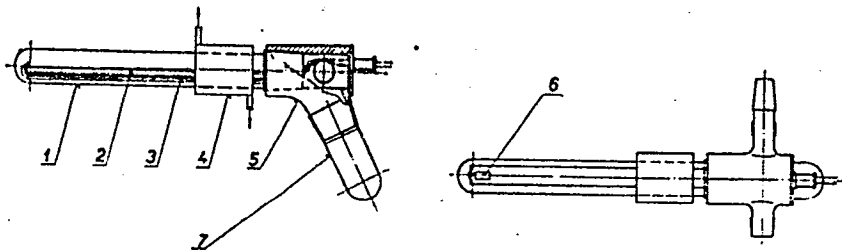
High-vacuum furnace for ...

24118  
Z/034/61/000/008/005/005  
E073/E535

operation. By means of this equipment it is possible to carry out the following: 1) Annealing in vacuum or in an inert atmosphere; 2) quenching from a certain temperature by tilting the heating jacket about the horizontal axis; 3) thermal etching of metallographic specimens; 4) oxidizing polished cuts by feeding O<sub>2</sub> or air into the chamber. Compared to Soviet equipment described by M. G. Lozinskiy, the here described furnace has a number of advantages; it permits quenching directly in vacuum and the furnace can be taken apart very quickly. There are 4 figures and 1 Soviet reference.

ASSOCIATION: ČSAV, Ústav jaderného výzkumu (Institute for Nuclear Research, ČSAV)

Fig. 2



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Z/038/61/000/012/002/003  
D291/D301

AUTHOR: Kovanicová, Věra

TITLE: Dimensional stability of uranium in thermal cycling

PERIODICAL: Jaderná energie, no. 12, 1961, 404-407

TEXT: Samples of metallic uranium exposed to repeated thermal changes have shown considerable dimensional changes, characteristically similar to those caused when they are irradiated by neutrons. A closer comparison shows that, aside from effecting dimensional changes, thermal cycling and irradiation of semicrystalline uranium increase the roughness of its surface and decrease its density. Some changes e.g. the varied behavior of monocrystals and varied temperature levels, at which the actual damage of the semicrystalline metal occurs, are of a different nature. The mechanism of depreciation is

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D291/D301

Dimensional stability ...

likewise different. A number of tests revealed that dimensional stability is a necessity at repeated thermal changes, even though it is insufficient prerequisite for the radiation stability of the metallic uranium sample. A preliminary selection of material preceding the irradiation tests can, therefore, be made applying the method of repeated thermal changes, thus accelerating the entire research and making it less costly. The author then describes the method of thermal cycling as well as the effect of various factors upon the dimensional changes of uranium samples during thermal cycling in the alpha phase region. He points out that the magnitude of the changes depends on the characteristics of the material (anisotropic properties, texture, size of grain) as well as the method of cycling. The size of the grain of non-textured samples should not affect the rate of material expansion. So far, however, this assumption has not been successfully

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D291/D301

Dimensional stability ...

confirmed in experiments. Soviet research sources have apparently observed during thermal cycling - especially on coarse grained samples - a refinement of the grains is caused by recrystallization in the areas of largest deformation. The author concludes that research on thermal stability of uranium was conducted primarily with the aim of finding a practical dependence on various factors. A uniform test method has so far not been arrived at, thus making it difficult to compare the test results of the various laboratories. The theory of thermal stability has not been refined since the quantitative evaluation of the diverse influences is still lacking. The importance of this problem is underlined by the papers of Soviet authors who have proven that not only purely anisotropic materials are subject to dimensional changes under thermal cycling, but under certain conditions, metals with cubic-centered lattice as well. (Technical editor: V. Křivan). There

Card 3/4



AUTHORS: Kovanits, P., Kulka, M. SOV/89-5-4-2/24

TITLE: Complex Automation of the Control of Nuclear Reactors  
(Kompleksnaya avtomatizatsiya upravleniya yadernymi reaktorami)

PERIODICAL: Atomnaya energiya. 1958. Vol 5, Nr 4, pp 403-411 (USSR)

ABSTRACT: This is a partial rendering of the problems given in the Geneva report Nr 2103 ex. 1958 in English, especially with respect to experiments. Translator not given. There are 6 figures and 3 references, 0 of which is Soviet.

ASSOCIATION: Institut yadernoy fiziki Chekhoslovatskoy Akademii nauk, Praga  
(Institute of Nuclear Physics of the Czechoslovakian AS, Prague)

SUBMITTED: March 14, 1958

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3  
KOVANITS, P. [Kovanic, P.] (Praga)

Equations of servosystems with movable detectors for the control of  
nuclear reactors. Avtom. i telem. 24 no.12:1660-1671 D '63.  
(MIRA 17:1)

L 27597-66 EWA(h)/EWI(d)/EWI(i) IJP(c)

ACC NR: AP6018481

SOURCE CODE: UR/0103/66/000/002/0037/0048

AUTHOR: Kovanits, P. (Prague)

43  
B

ORG: none

TITLE: Generalized discrete analog of the Zadeh and Ragazzini problem

SOURCE: Avtomatika i telemekhanika, no. 2, 1966, 37-48

TOPIC TAGS: polynomial, signal noise separation, electric filter

ABSTRACT: A matrix solution of a generalized discrete analog of the Zadeh-Ragazzini problem is presented, and its relationship to the problem of statistical evaluation of linear forms and with processing of piecemeal observations is noted. (The problem involves construction of an optimal continuous linear filter with constant parameters and finite memory for a signal consisting of a non-random polynomial and a stationary random component arriving at the input of the filter together with a stationary random noise component). The extremal properties of the solution and two possible approaches to computation of the required results are analyzed. The matrix form of the solution allows the greater portion of the computation to be eliminated for problems which are similar. Orig. art. has: 95 formulas. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 09 / SUBM DATE: 15Apr65 / ORIG REF: 011 / OTH REF: 009

Card 1/1

IND: 621.391.172

I. 10333-67 EWP(k)/EWP(h)/EWT(d)/EWP(1)/EWP(v)  
ACC NR: A16029799

SOURCE CODE: UR/0089/66/021/002/0116/0120

AUTHOR: Kovanits, P.; Rygl, Ya.

ORG: Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez (Institut yadernykh issledovaniy Chekhoslovatskoy akademii nauk)

TITLE: Digital servomechanism for nuclear technology

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 116-120

TOPIC TAGS: nuclear reactor technology, nuclear reactor control equipment, servomechanism, digital system

ABSTRACT: The authors describe a digital unit intended for the measurement of the relative deviation of the pulse counting rate from a specified value and consisting of two binary accumulating adders, a scaler unit, and a control device (Fig. 1). Different operating conditions can be set up by different switching combinations of the input gates. The construction and operating principles of the equipment are described. It is shown that by introducing suitable feedback loops it is possible to construct from such devices digital servomechanisms operating with pulse detectors. The use of this digital servomechanism for the measurement and automatic control of the power and the period of a nuclear reactor is described by way of an example. Possible variants of the application are systems for the control of the deviation of the reactor power from a specified value, or systems for automatic regulation of both the power and the period of the reactor. Orig. art. has: 2 figures, 3 formulas, and 2 tables.

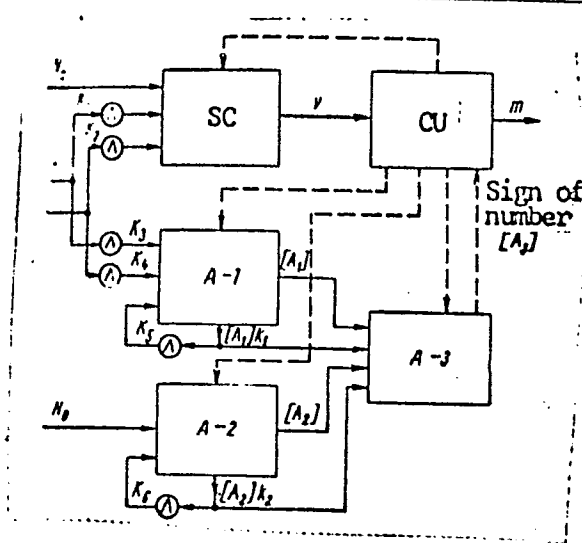
UDC: 621.039.564

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L 10333-67  
 ACC NR: AP6029799

Fig. 1. Generalized block diagram of digital meter.

A - Adder, SC - scaler, CU - control unit.



SUB CODE: 18, 09/    SUBM DATE: 18Feb66/    OTH REF: 005

Card 2/2 1980.

KOVAN'KO A. S.

Sur une generalisation des fonctions presque periodiques. C. R. Acad. Sci., 186 (1928), 354-355.

Sur l'approximation des fonctions presque periodiques generalisees. Matem. SB., 36 (1929) 409-416.

Sur l'approximation des fonctions presque periodiques generalisees. C. R. Acad. Sci., 188 (1929), 142-145.

Sur une classe de fonctions presque periodiques qui engendre des classes de fonctions p. p. de W. Stepanoff, H. Weyl et A. Bezikovitch. C. R. Acad. Sci., 189 (1929), 393-396.

Sur une classe des fonctions presque periodiques generalisees. DAN CAE. (1930), 145-146

Sur les classe des fonctions presque periodiques generalisees. Ann. de Math., 9 (1931), 24.

Sur la structure des fonctions presque periodiques generalisees. C. R. Acad. Sci., 198-(1934), 792-794.

Sur la structure des fonctions presque periodiques generalisees. Matem. SB., 42 (1935), 3-18.

Sur les systemes compactes des fonctions presque periodiques generalisees de W. Stepanoff. Matem. SB., 9 (51), (1941), 389-402.

O kompaktnosti sistem obobshchennykh pochtii periodicheskikh funktsiy bezikovicha. Matem. SB., 16 (59), (1945), 365-382.

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A. G.,

Markushovich, A. I.,

Rashevskiy, P. K.

Moscow-Leningrad, 1948

SADOV, A.I.; KOVANIKO, A.A., doktor matematicheskikh nauk, professor, redaktor.

[Theory of probabilities] Teoriia veroiatnostei. Moskva, Upravlenie  
voenno-morskogo izd. NKVMF Soiuza SSR, 1945. 115 p. (MLRA 6:5)  
(Probabilities)

KOVAN'KO, A.S.

Quadrability of certain special-type surfaces based on Lebesgue's  
method. Nauk.zap. L'viv. un. no.5:34-52 '47. (MLRA 8:11)  
(Integrals, Generalized) (Surfaces)



KOVAN'KO, A.S.

Compactness of generalized function systems which are in Weyl's  
sense almost periodic. Nauk.zap. L'viv. un. no.5:53-67 '47.  
(Functions, Periodic) (MLRA 8:11)

KOVAN'KO, A. S.

Transformations (Mathematics)

Certain continuous transformations of planes into a plane and dimensional computation of the surface. Nauk. zap. L'viv. 12 no. 3, 1949.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

KOVAN'KO, A.S.; LOPATINSKIY, Ya.B., otvetstvennyy redaktor

~~.....~~  
[Lebesgue's integral] Integral Lebega. L'vov, Knizhno-zhurnal'noe  
izd-vo, 1951. 198 p. (MLRA 9:7)

1. Chlen-korrespondent AN USSR (for Lopatinskiy)  
(Integrals)

KOVAN'KO, A. S.

Mathematical Reviews  
Vol. 14 No. 11  
Dec. 1953  
Analysis

Kovan'ko, A. S. On convergence of sequences of functions  
in the sense of Weyl's metric  $D_{W\omega}$ . Ukrain. Mat. Zhurnal  
3, 465-476 (1951). (Russian)

For functions  $f(x)$  and  $\varphi(x)$  of  $L_\omega$  defined for all real numbers  $D_{W\omega}^T(f, \varphi)$  denotes the Stepanoff distance and  $D_{W\omega}(f, \varphi) = \lim_{T \rightarrow \infty} D_{W\omega}^T(f, \varphi)$  is the Weyl distance. The space of functions with a finite Weyl norm is not complete. A sequence  $\{f_n(x)\}$  is called uniformly  $D_{W\omega}$ -fundamental when there exists a function  $T_0(\epsilon)$ ,  $\epsilon > 0$ , such that  $\limsup_{n, m \rightarrow \infty} D_{W\omega}^T(f_n, f_m) < \epsilon$  if  $T > T_0(\epsilon)$ . It is called uniformly  $D_{W\omega}$ -convergent to  $f(x)$  if there exists a function  $T_0(\epsilon)$ ,  $\epsilon > 0$ , such that  $\limsup_{n \rightarrow \infty} D_{W\omega}^T(f, f_n) < \epsilon$  if  $T > T_0(\epsilon)$ . The author proves that a sequence is uniformly  $D_{W\omega}$ -convergent if and only if it is uniformly  $D_{W\omega}$ -fundamental. He further proves by examples that a sequence can be uniformly  $D_{W\omega}$ -convergent without being  $D_{W\omega}^T$ -convergent, and that it can be  $D_{W\omega}$ -convergent. A final example, proving that a sequence can be  $D_{W\omega}$ -fundamental without being  $D_{W\omega}$ -convergent, is very similar to one given by H. Bohr and E. Følner /Acta Math. 76, 21-55 (1945); these Rev. 7, 154/.  
H. Tornehave (Copenhagen).

8-24-54  
LL

4

KOVAN'KO, A. S.

191T85

USSR/Mathematics - Schools

Jul/Aug 51

"The Mathematical Olympiad at L'vov During the  
1950-51 School Year," A. S. Kovan'ko

"Uspekh Matemat Nauk" Vol VI, No 4 (44), pp 221-  
223

The math olympiad of students belonging to the  
7th-10th grades of schools in L'vov and its en-  
virons ended 15 Apr 51. It had been organized  
as in past years by the L'vov State U and by the  
Soc for the Dissemination of Pol and Sci Know-  
ledge, GORONO (City Soc for Sci Olympiad) and  
OBLONO (Oblast Soc for Sci Olympiad).

191T85

PA 196182

USSR/Mathematics - Non-Euclidean Geometry Nov/Dec 51

"Scientific Conference at the City of L'VOV Dedicated to the 125th Year of the Discovery by N. I. Lobachevsky of Non-Euclidean Geometry," A. S. Kovan'ko

"Uspekhi Matemat Nauk" Vol VI, No 6 (46), p 192

On 24 Feb 51 the Physicomath Faculty, L'VOV State U, noted the 125th year of the discovery of non-Euclidean Geometry by the great Russian mathematician (23 Feb 1826), by organizing a scientific conference where 4 lectures 196182

USSR/Mathematics - Non-Euclidean Geometry (contd) Nov/Dec 51

were heard: Docent G. I. Buyzola, "The Scientific Activities of Lobachevsky"; Student A. I. Vol'pert, "Lobachevsky as a Teacher and Administrator"; Instructor (senior) V. P. Rogachenko, "Philosophic Views of Lobachevsky"; Prof A. S. Kovan'ko, "Non-Euclidean Geometry and Its Present State and Development."

196182

KOVAN'KO, A. S.

KOVAN'KO, A.S., professor.

Convergence of sequences of functions in certain metric spaces.  
Dop.ta pov.L'viv.un. no.3 pt.2:47-48 '52. (MLBA 9:11)

(Spaces, Generalized)

KOVAN'KO, A. S.

USSR/Mathematics - Pedagogy

Jul/Aug 52

"Mathematical Olympiad in City of L'vov During the  
1951/52 School Year," A. S. Kovan'ko

"Uspekhi Matemat Nauk" Vol VII, No 4 (50), pp 188, 189

Subject olympiad (7-10 classes of middle schools) was completed 16 Mar 52, which had been organized by the L'vov State U, the Soc for the Propagation of Pol and Sci Knowledge, and the City Div of Pub Educ. Prof L. I. Volkovyskiy headed the organizing committee. Gives examples of 6 problems (e. g., how many ciphers are in the number  $2^{100}$ ?).

225T71



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