KUNSTETTER, S.

The geometry of helicoid surfaces. p. 417

MECHANIK Warszawa, Poland Vol. 32, no.8, Aug. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2
Feb. 1960
Uncl.

KUNSTETTER, Stanislaw, doc.mgr inz.

Contemporary methods of calculation of the forces of the metal cutting process. Mechanik 36 no.1:17-21 '63.

1. Politechnika, Warszawa.

KUNSTLER, F.

Examination of the motion of the bobbin on the Schonherr BO wool power loom. II. p. 305. Magyar Testiltechnika. Budapest. No. 8, Aug. 1955.

Source: East European Accessions List, (EEAL), Lc, Vol. r, No. 2, Feb. 1956

KUNSTLER, F.

Examination of the motion of the bobbin of the schonherr BO wool power loom. (To be contd.) p. 272. KOHASZATI LOPAK (Magyar Banaszati es Kohaszati Egyesulet) Budapest. Vol. 10, No. 4, Jan, 1955

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 6, June 1956

KUNSTMAN, Halina

GELBER, Jerzy; KUNSTMAN, Halina; SWIERCZEWSKI, Stanislaw

Types of Corynebacterium observed in the Szczecin region during 1952-54. Med. dosw. mikrob. 7 no.1:59-63 1955.

1. Z Wojewodziej Stacji Sznitarno-Epidemiologichnej w Szczecinic i z Oddzialu Dzieciecego Zakaznego Woj. Szpitala Specjalistycznego w Szczecinie.

(CORYNEBACTERIUM,
types of strains isolated in Poland)

KUNSTMAN, V.G.

Reproducibility of the magnetic field distribution in electromagnetic analyzers. Elektrosvyaz' no.2:80-89 '64. (MIRA 18:3)

L 39635-66 EWT(1) UR/0286/65/000/024/0041/0041

ACC NR: AP6002884 SOURCE CODE: UR/0286/65/000/024/0041/0041

9
B

AUTHOR: Kunstman, V. G.; Tsvetkov, V. N.

ORG: none

TITLE: Device for measuring the strength of magnetic fields, Class 21, no. 176977

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 41

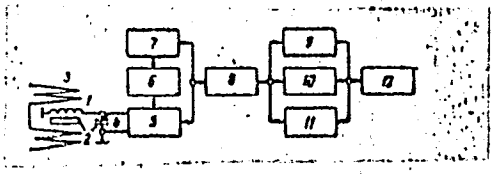
TOPIC TAGS: magnetic field, magnetic field intensity, nonhomogeneous magnetic field, magnetic field measurement, measurement, measuring apparatus, nuclear magnetic resonance

ABSTRACT: The device for measuring the strength of magnetic fields, based on the utilization of the nuclear magnetic resonance phenomenon, consisting of a transmitter with a high-frequency coil, an ampoule with working substance and modulator coil located in the measured magnetic field, a generator, a wide-band amplifier, a detector, a low-frequency amplifier, and an oscillograph, is characterized by the fact that resonance amplifiers connected in parallel and tuned to the first, second and third harmonic of the nuclear magnetic resonance signal are included between the low-frequency amplifier and the oscillograph. These features are incorporated in the design in order to facilitate the search for the nuclear magnetic resonance signal in fields of relatively high nonhomogeneity and to increase the signal to noise ratio.

Card 1/2

L 39635-66

ACC NR: AP6002884



1. high-frequency transmitter coil, 2. ampoule with working substance, 3. modulator coil, 4. capacitor, 5. generator, 6. wide-band amplifier, 7. detector, 8. reference frequency amplifier, 9 - 11. resonance amplifiers, 12. oscillograph

SUB CODE: 14,20/ SUBM DATE: 25Jun64/

Card 2/2 MLP

L 08928-67
ACC NR: AP6030151 SOURCE CODE: UR/0120/66/000/004/0166/0168

AUTHOR: Kunstman, V. G.; Tsvetkov, V. N.

ORG: none

TITLE: Magnetic field intensity meter with automatic self-adjustment to the measured field

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 166-168

TOPIC TAGS: magnetic field intensity, magnetic field measurement, weak magnetic field, magnetic field measuring device, electronic test equipment

ABSTRACT: A magnetic field intensity meter which uses the phenomenon of proton resonance in automatically adjusting to and following the field being measured has been developed. The device consists of two units: a high frequency unit with sensors and an autodyne circuit, and a control unit with low frequency circuit components. The device is designed for the 1—16 Koe (4—70 Mc) range. By using the automatically adjusting frequency autodyne, the frequency deviation from the resonance value of the field due to various destabilizing factors is reduced by a factor of 30. With an inhomogeneity of the measured magnetic field 10^{-3} cm^{-1}, the deviation of the frequency resonance value does not exceed 10^{-5} Orig. art. has: 1 figure. [KM]

SUB CODE: 09/ SUBM DATE: 11Aug65/ ORIG REF: 002/ OTH REF: 001/

Card 1/1 UDC: 621.317.44

KUNSTOVNY, P.

A cobweb steel construction of the Svarox type. p. 182. (Pozemni Stavby, Vol. 5, No. 4, Apr 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

KUNSTVEZEL, Algemeene

V. 15, Jan. 1954

Refractories

V. 859. MINERAL FIBRE INSULATING MATERIAL. Algemeene Kunstvezel Maatschappij, N.V., Fleming, W.L., and McNall, H. (German P. 811,689/1951; abstr. in Chem. Abstr., 1953, vol 47, 7756). Insulating sheets are prepared by coating mineral fibres with an aromatic-petroleum-extract binder. Thus, 50 parts by weight of petroleum extract of an approximate specific gravity of 1.04 and a softening point of 57°, 6 parts milk casein, 1.5 parts ammonia, and 2.0 parts water are used. The casein is dissolved in the ammoniacal water and placed in a mixer with a stirrer. The petroleum extract is heated to 120° and slowly added. The mixture which thickens after cooling, is sprayed on to the mineral fibres. C.A.

16-11-54

KUNSTYR, I.; POSPISIL, J.

Penetration of Serratia marcescens from the intestine into the organism of irradiated dogs. Folia microbiol. 7 no.1:83-87 '62.

1. Veterinary Research Unit, Prague.
(SERRATIA MARCESCENS infect) (INTESTINES microbiol)
(RADIATION INJURY exper)

KUNSTYR, Ivo

Salmonella infections in dogs. Cesk. epidem. 11 no.3:157-159 My '62.

1. Veterinarni vyzkumne stredisko, Praha.

(SALMONELLA INFECTIONS veterinary)
(DOGS dis)

HUNGARY / Chemical Technology. Chemical Products and H
Their Applications. Binding Substances. Concrete
and Other Silicate Building Materials.

Abs Jour: Ref Zhur-Khimya, 1959, No 4, 12654.

Author : Kunszt, Gyorgy.
Inst : Not given.
Title : Bauxite as a Filler for Concretes Used for Radiation Protection.

Orig Pub: Epitoanyag, 1958, 10, No 1-2, 23-27.

Abstract: The great content in bauxite (B) of hydrate water (12-20%) permits making a proposal for its possible use instead of limonite in concretes used for radiation protection. By taking into account the fact that the neutron capture cross-section is limited by the content of hydrogen in concrete, a conclusion can be drawn as to the necessity for

Card 1/2

HUNGARY / Chemical Technology. Chemical Products and H
Their Applications. Binding Substances. Concrete
and Other Silicate Building Materials.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12654.

Abstract: using B in which the content of hydrate water that enters into a unit of volume is greater than in limonite. Adding a small quantity of scrap metal to the concrete mixture can compensate for an insufficiency of B. Bib. 7 titles. -- D. Pyushpeki.

Card 2/2

KUNSZT, Gyorgy, dr.

Fourth Scientific Session of architectural researchers. Epites szemle 8 no. 2:38-45 '64.

1. Epitesugyi Miniszterium Muszaki Fejlesztesi Foosztalyanak osztalyvezetoje.

KUNSZT, György, inz. dypl.

Designing and testing concretes in high water content for the construction of protection walls against ionizing radiation. Inst tech budow biul inf no.11:16-24 '62.

KUNSZT, Gyorgy

Effect of external factors on the steam-strengthened concrete.
Epitoanyag 14 no.11:393-396 N '62.

KUNSZT, Gyorgy, dr.

On the development of the work of the research institutes of the Ministry of Construction. Epites szemle 7 no.3:65-70 '63.

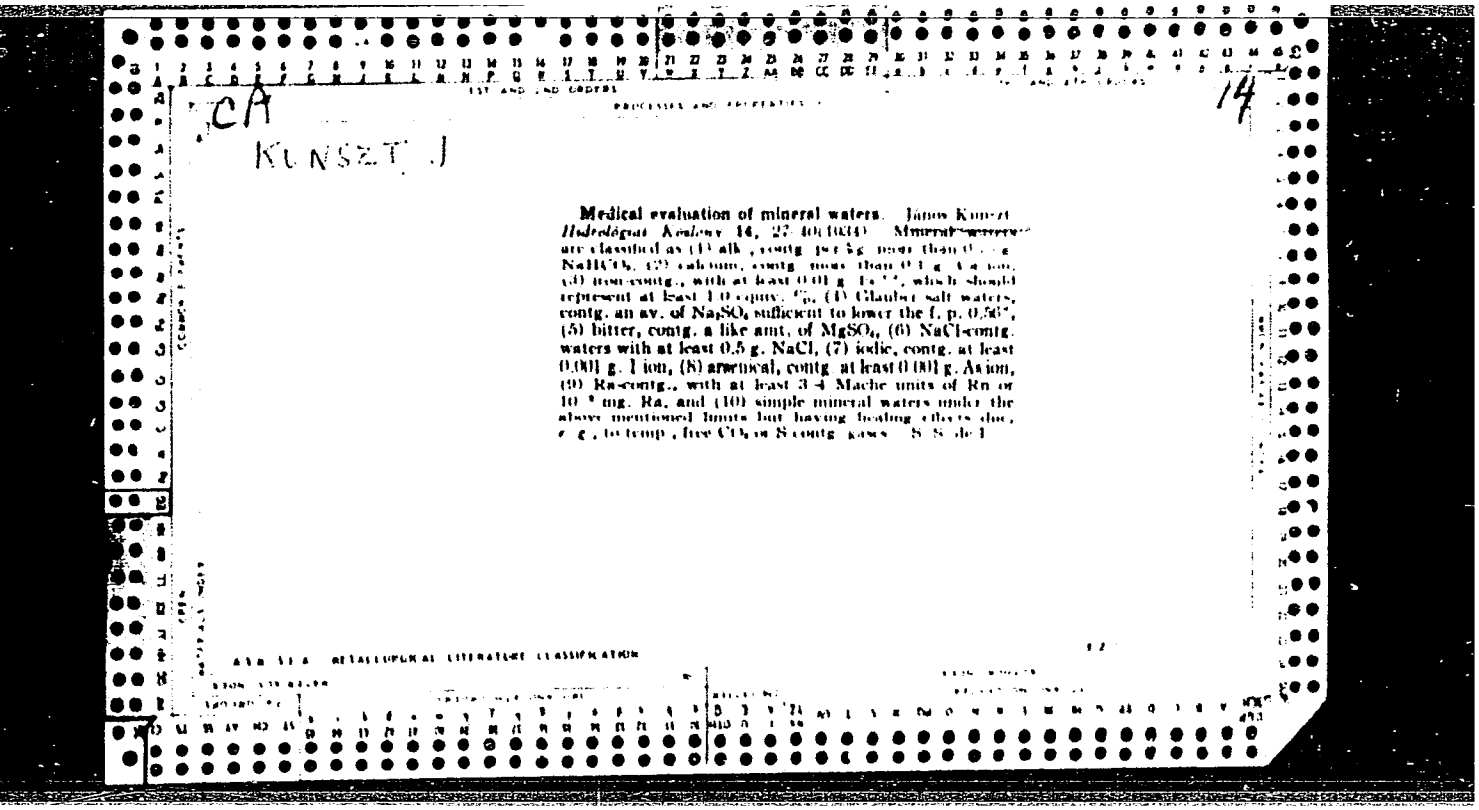
1. Epitesugyi Miniszterium Muszaki Fejlesztesi Foosztalyanak osztalyvezetoje.

KUNSZT, Gyorgy, dr., a muszaki tudomanyok kandidatusa

Experiments with heavy concrete prepared with bauxite aggregate used for radiation shielding. Magy ep ipar 12 no.6:265-270 '63.

KUNSZT, Gyorgy, dr.

"Concrete and reinforced concrete works" by Levi, Rabinovics, Szavalov. Reviewed by Gyorgy Kunszt. Epitoanyag 16 no.7:275 Jl '64.



CA

KUNSZT J

14

Medical evaluation of mineral waters. János Kunszt. *Hidrológiai Közlöny* **14**, 27–40 (1934). Mineral waters are classified as (1) alk., contg. per kg. more than 0.5 g. $NaHCO_3$, (2) calcium, contg. more than 0.1 g. Ca ion, (3) iron-contg., with at least 0.01 g. Fe ion, which should represent at least 1.0 equiv. %, (4) Glauber salt waters, contg. an av. of Na_2SO_4 sufficient to lower the f. p. 0.56°, (5) bitter, contg. a like amt. of $MgSO_4$, (6) NaCl-contg. waters with at least 0.5 g. NaCl, (7) iodic, contg. at least 0.001 g. I ion, (8) arsenical, contg. at least 0.001 g. As ion, (9) Ra-contg., with at least 3–4 Mache units of Rn or 10^{-9} mg. Ra, and (10) simple mineral waters under the above mentioned limits but having healing effects due, e. g., to temp., free CO_2 or S contg. gases. S. S. de J.

KUNSZT, JANOS, ed.

Furdosok kezikonyve. Irtak: Banfai Ivan (et al.) Budapest, Hungary. Medicina, 1957. 212 p.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, November 1959, Uncl.

KUNTER, G.

Urgent problems in the situation of the working class in West Germany. Sots. trud. no.8:31-38 Ag '58. (MIRA 11:9)

1.Drezdenskiy nauchno-issledovatel'skiy institut ekonomiki i okhrany truda.
(Germany, West--Economic conditions)

RONIS, I. S.

Sliding contact of electric machinery.
Moskva, Redatksionno-izdatel'skill otdel TSBTI, 1948. 55 p. (49-29776)

TK2821.K8

KUNTS, I. S.

PA 22/49T21

USSR/Electricity
Bibliography

Oct 48

"New Dissertations Submitted at the All-Union Electrotechnical Institute Imeni Lenin," I. S. Kunts, Cand Tech Sci, 1 p

"Elektrichestvo" No 10

Summarizes seven dissertations for degree of candidate of technical sciences.

FDB

22/49T21

KUNTS, I. S.

54/49T55

USSR/Engineering Jun 49
Publications
Scientists

"Dissertations at the All-Union Electrical Engineering Institute Imeni Lenin," I. S. Kunts, Cand Tech Sci, 1 p

"Elektrichestvo" No 6

Annotations on seven dissertations for degree of candidate of technical sciences include: S. I. Dzhonchel'skaya's "High-Polymeric Compounds as Gas-Generating Materials," I. A. Poltayev's "Testing Arbitrary Extinction of a Gas Discharge," and

54/49T55

USSR/Engineering (Contd) Jun 49

S. A. Yamanov's "Dependence of Dielectric Losses Upon the Chemical Composition of High-Polymeric Organic Compounds."

54/49T55

POBEGAYLO, V.M., mladshiy nauchnyy sotrudnik; GLUKHEN'KIY, V.T., maldshiy nauchnyy sotrudnik; KUNTS, S.A., ordinator

Chloromycetin emulsion for treating streptoderma. Vest.ven. i derm. 30 no.4:52 Jl-Ag '56. (MLRA 9:10)

1. Iz L'vovskogo kozhno-venerologicheskogo instituta.
(CHLOROMYCETIN) (SKIN--DISEASES)

Kunts, V.V.

USSR/Physics - Nuclear momenta

Card 1/1 Pub. 118 - 2/3

Authors : Kyul'ls, Ye. F.; Kunts, V. V.; and Khartman, V. G.

Title : Table of nuclear momenta

Periodical : Usp. fiz. nauk 55/4, 537-593, Apr 1955

Abstract : A table of nuclear momenta with the indication of a method and the precision of measurement is presented. The [illegible] the data given in "Physical Abstracts" published prior to September 1954. In the reference list, all work on the determination of the [illegible]

Institution : .....

Submitted : .....

CZECHOSLOVAKIA

DIEPOLD, F., KUNTSCHER, V., VLK, J; Physiological Institute, Medical Faculty, Charles University (Fysiologicky Ustav Lk. Fak. KU) Plzen.

"Further Information on the Influence of Food Administration on Acetylcholine Changes in the Walls of the Digestive Tract of White Rats."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 2, Feb 66, p 91

Abstract: One hour after the administration of food cholinesterase activity of the stomach walls is much higher than during starvation. 4 - 6 hours following feeding the acetylcholine content in duodenum walls is substantially higher than during starvation. There is a smaller difference in the walls of the ileum. 2 Western, 3 Czech references. Submitted at "16 Days of Physiology" at Kosice, 30 Sep 65.

1/1

USSR / Cultivated Plants. Plants for Technical Use. M
Oil Plants. Sugar Plants.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25001

Author : Kuntse, A.
Inst : Moscow Agricultural Academy im. K. A. Timiryazeva
Title : New Methods for the Cultivation of the Sugar Beet

Orig Pub : Sb. stud. nauchno-issled. rabot. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957 (1958), vyp 7, 87-92

Abstract : On the Ulatso-Lyulinets Experimental Selection Station (UkSSR) in 1955, effectiveness of various methods of sowing the sugar beet was investigated at length- and crosswise cultivation. Planning, conditions and

Card 1/2

89515

S/079/61/031/002/008/019
B118/B208

53630

AUTHORS: Petrov, K. A., Neymysheva, A. A., Fomenko, M. G., Chernushevich, L. M., and Kuntsevich, A. D.

TITLE: Reaction of N-chloroimides of carboxylic acids with trialkyl-, halogen-, and cyano phosphites

PERIODICAL: Zhurnal obshchey khimii, v. 31, no.2, 1961, 516-522

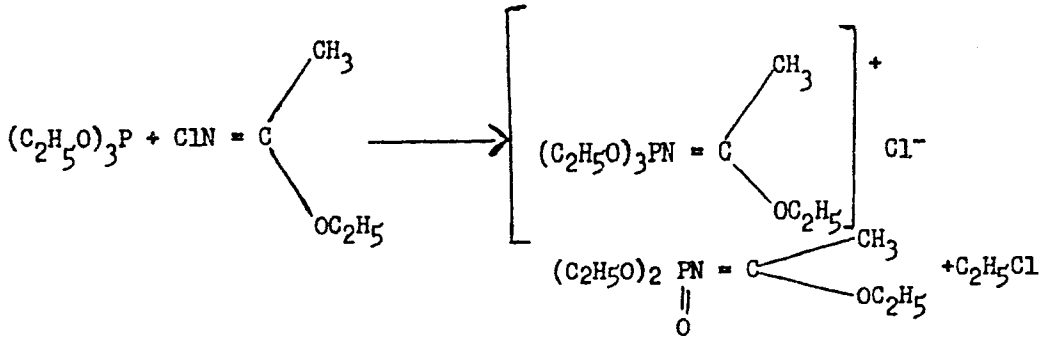
TEXT: The authors studied the reaction of N-chloroimides of esters of acetic and carboxylic acids with trialkyl-, halogen-, and cyano phosphites. Contrary to the vigorously reacting sulfene chlorides, chloroamines, and alkyl hypochlorites, the reaction of N-chloroethyl acetimide with triethyl phosphite proceeds smoothly and with little heat evolution. Separation of ethyl chloride occurs only on prolonged heating at 60-70°C. This reaction probably takes place in two stages:

Card 1/4

89515

S/079/61/031/002/008/019
B118/B208

Reaction of N-chloroimides ...



The free phosphonium compound was not obtained. Chloroimides of carboxylic acid esters react more vigorously with phosphites; main products are the esters of dialkoxy-methylenamide of phosphoric acid. The chloroamides react with dialkyl chloro and dialkyl fluoro phosphites, alkyl dichloro and alkyl difluoro phosphites in a similar manner, giving the corresponding halogen amidophosphates in yields of between 27.5 and 70.5%.

Card 2/4

89515

S/079/61/031/002/008/019
B118/B208

Reaction of N-chloroimides ...

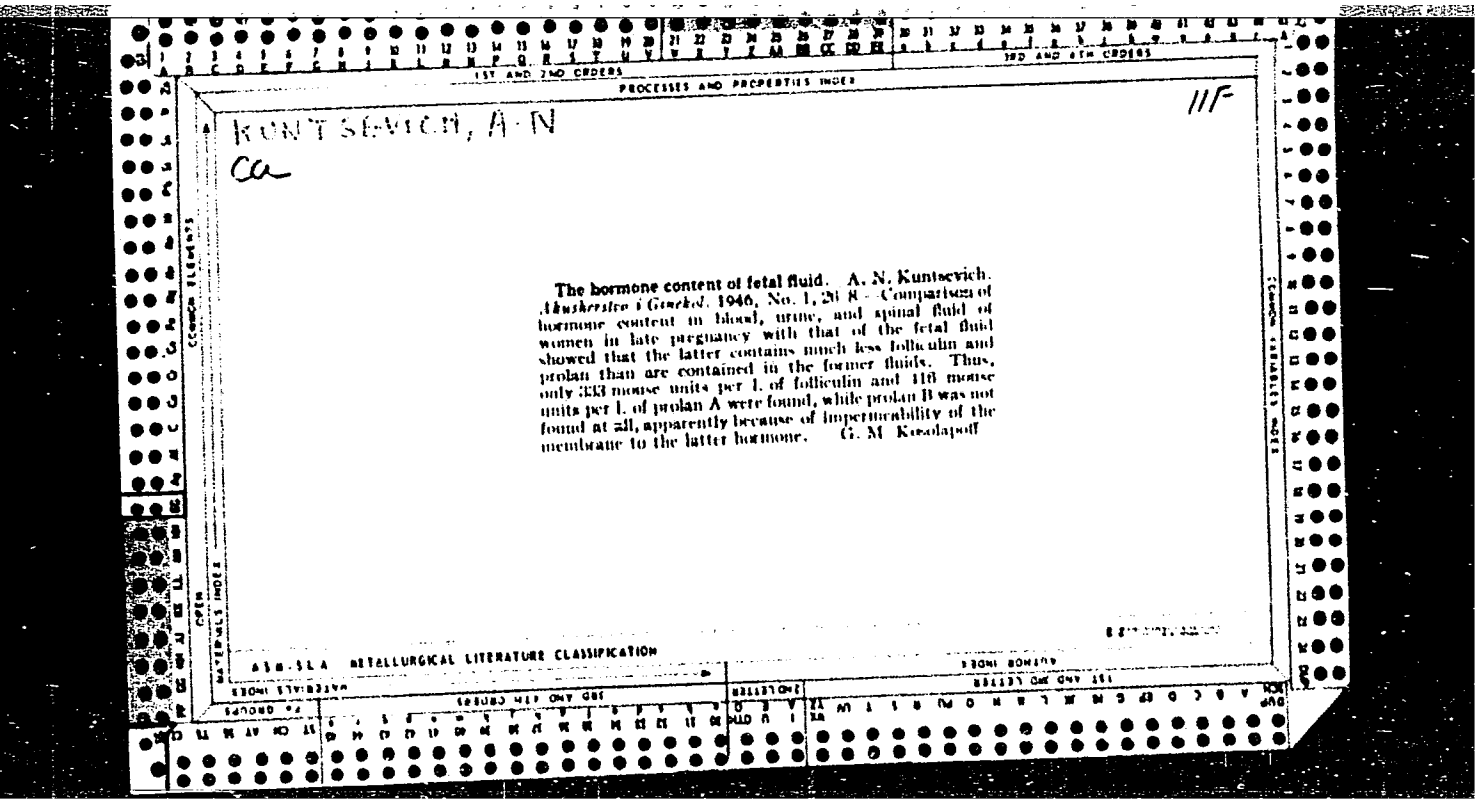
Dialkyl fluoro phosphites give with chloroimides rather stable phosphonium compounds. Prolonged heating of the phosphonium compounds reduces the yield of fluoro phosphates; the reaction mixture was, therefore, distilled in vacuum after heating for 1-2 hr at 40-50°C. The fluoro amidophosphates are thermostable and are slowly hydrolyzed with water. When treating difluoro amidophosphates with aqueous alkali lyes at low temperatures, only one fluorine atom is hydrolyzed. On the action of a calculated quantity of sodium alcoholate in the solvent, only one fluorine atom is substituted by the alkoxy radical. Chloro amidophosphates are not thermostable, contrary to fluoro amidophosphates, distill only in high vacuum, and are easily hydrolyzable even at room temperature. When treating chloro amidophosphates with potassium cyanate in water at 5°C, the cyano group is substituted for chlorine, in addition to hydrolysis; in this way, the ethyl ester of

Card 3/4

Reaction of N-chloroimides ...

diethoxy-methylenamide of cyano phosphoric acid results in a 20% yield. By reacting chloroimides with cyano phosphites, cyano amidophosphates are obtained according to Arbuzov's rearrangement (Ref. 2) in yields between 30 and 50%. Dialkoxy-methylenamides of dicyano phosphoric acid are unstable and decompose with separation of gaseous products. There are 1 table and 4 references: 2 Soviet-bloc.

SUBMITTED: February 15, 1960



KUNTSEVICH, A·N

Ca

111F

The hormone content of fetal fluid. A. N. Kuntsevich. *Akusherstvo i Ginekol.* 1946, No. 1, 38–8.—Comparison of hormone content in blood, urine, and spinal fluid of women in late pregnancy with that of the fetal fluid showed that the latter contains much less folliculin and prolan than are contained in the former fluids. Thus, only 333 mouse units per l. of folliculin and 116 mouse units per l. of prolan A were found, while prolan B was not found at all, apparently because of impermeability of the membrane to the latter hormone. G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

L 00038-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACCESSION NR: AP5023710 UR/0075/65/020/008/0802/0804
543.70

AUTHOR: Onosova, S. P.; Kuntsevich, G. K.

TITLE: Spectrophotometric study of the reaction of scandium ions with pyrocatechol violet

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 8, 1965, 802-804

TOPIC TAGS: scandium, scandium compound, spectrophotometric analysis, dye chemical

ABSTRACT: Scandium and pyrocatechol violet form a blue complex of anionic character at a 1:1 molar ratio. The absorption maximum of the complex is reached at pH ≥ 5 (λ = 590 mμ) and remains constant with rising pH. The optimum pH range selected was 5.0-5.7; it was produced with urotropine and acetate buffer solutions. The average value of the molar extinction coefficient ε is $(1.73 \pm 0.13) 10^4$. For a complete color development, a twofold excess of the reagent is sufficient. A linear dependence of the optical density of the colored solution on the scandium concentration is observed up to 60 μg per 25 ml of solution. Complex-forming ions such as citrate, tartrate, oxalate, acetate, etc., and ions of thorium, aluminum,

Card 1/2

L 00030-66
ACCESSION NR: AP5023710

iron, copper, etc. interfere with the color development. A procedure for the determination of scandium in the absence of interfering ions is given. Orig. art. has: 5 figures.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk (Ural Polytechnic Institute)

SUBMITTED: 08May64 ENCL: 00 SUB CODE: GC, OP

NO REF SOV: 003 OTHER: 000

Card 2/2

ADAMOVICH, V.I.; KUNTSEVICH, I.M.; FISHER, I.Z.

Short-range order near an excited molecule in a liquid. Zhur. fiz. khim. 37 no.11:2568-2570 N'63. (MIRA 17:2)

1. KUNTSEVICH, I.

2. USSR (600)

4. Climbing Plants

7. Use of liana for city landscaping. Ahil. -kom, khoz. 2 no. 9, 1952

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

KUNTSEVICH, I. P.

GROKHOL'SKAYA, V.S., kandidat sel'skokhozyaystvennykh nauk; KUNTSEVICH, I.P., kandidat tekhnicheskikh nauk.

Transplanting large bare-root trees. Gor.khoz.Mosk. 31 no.6:31-32 Je '57. (MLRA 10:7)

(Moscow--Tree planting)

KUNTSEVICH, I.P., kand. tekh. nauk.

Let's use climbing plants to make our city more beautiful. Gor. khoz. Mosk. 32 no.3:18-19 Mr '58. (MIRA 11:3)
(Moscow--Climbing plants)

KUNTSEVICH, I., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Special workers for landscaping cities. Zhil.-kom. khoz. 10 no.11: 13-14 '60. (MIRA 13:11)

1. Akademiya kommunal'nogo khozyaystva.
(Landscape gardening)

KUNTSEVICH, Iosif Porfir'yevich, kand. tekhn. nauk; TER-MKRTICHAN, Ashot Khristoforovich, inzh.; SHMELEV, G.M., red.; SMIRNOVA, R.N., red.izd-va; KHENOKH, E.M., tekhn. red.

[Machines and implements for establishing and maintaining green-belts and parks; an album]Mashiny i orudiia dlia zelenogo stroitel'stva i khoziaistva; al'bom. Moskva, 1962. 144 p. (MIRA 16:1)

1. Akademiya kommunal'nogo khozyaystva.
(Landscape gardening--Equipment and supplies)

KUNTSEVICH, I.P., kand. tekhn. nauk; SIMONYAN, A.A., kand. tekhn. nauk; BATURIN, T.F., inzh.

Garden and park machinery and devices. Nov. tekh. zhil.-kom. khoz.: Blagoustr. gor. [no.1]:12-25 '61. (MIRA 18:5)

GRINGAUZ, M.Ya.; KUNTSEVICH, M.A.

Study of the permeability of the skin by means of radioactive isotopes Report no.1. Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 6:38-47 '59. (MIRA 13:11)

(SKIN)
(ISOTOPES--PHYSIOLOGICAL EFFECT)

GRINGAUZ, M.Ya.; KUNTSEVICH,M.A.

Study of the permeability of the skin by means of radioactive isotopes. Report No.2. Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 6:91-101 '59. (MIRA 13:11)

(SKIN)
(ISOTOPES--PHYSIOLOGICAL EFFECT)

SOSNOVSKIY, A.T., kand.med.nauk; KUNTSEVICH, M.A., nauchnyy sotrudnik; KASPEROVICH, N.K.

Transplantation of bone marrow in radiation sickness in animals. Zdrav.Bel. 7 no.8:35-36 Ag '61. (MIRA 15:2)

1. Iz kafedry kozhvenbolezney Minskogo meditsinskogo instituta i Belorusskogo kozhveninstituta (dir. - akademik AMN SSSR A.Ya. Prokopchuk).
(MARROW--TRANSPLANTATION) (RADIATION SICKNESS)

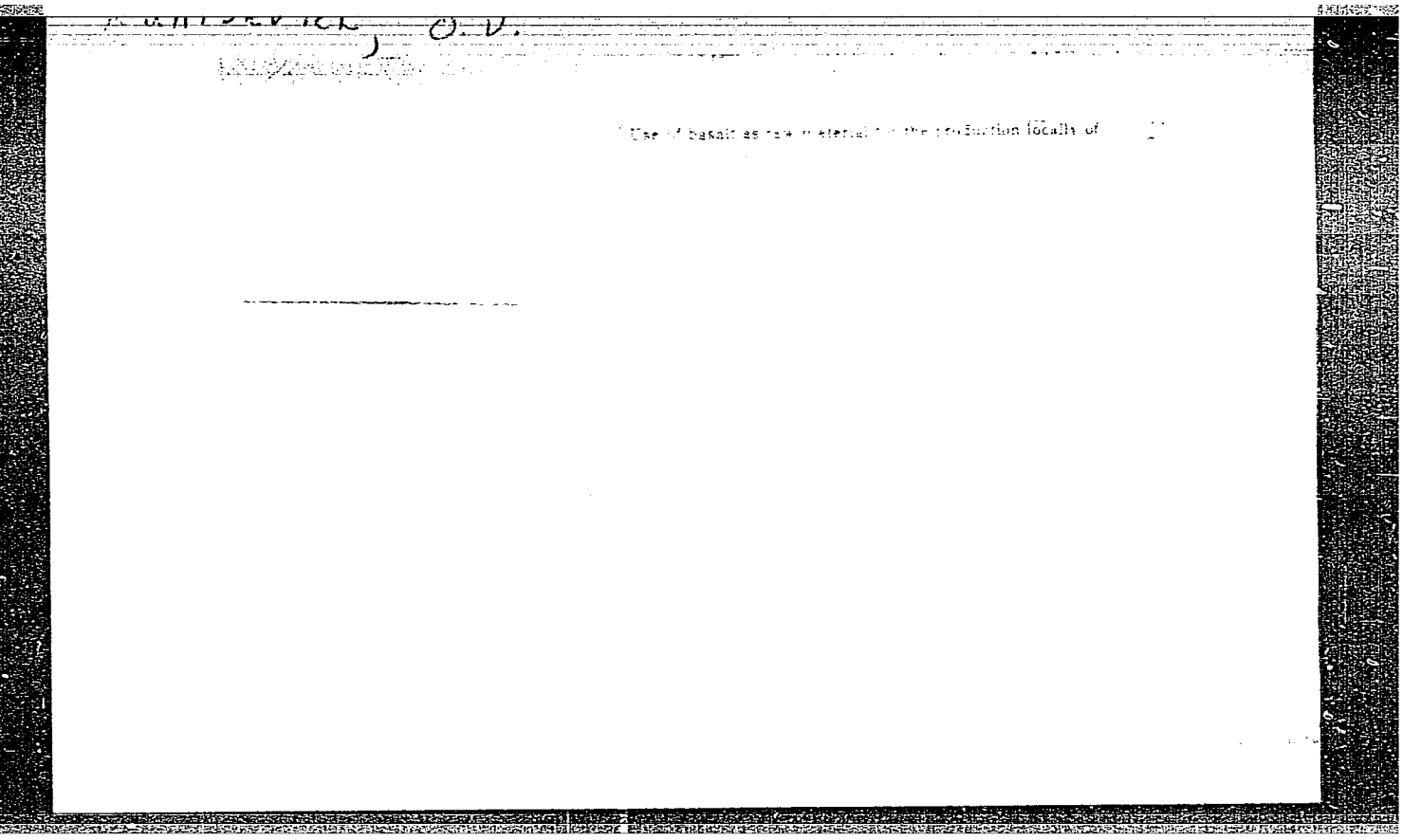
PERYSHKIN, G.A.; KUNTSEVICH, N.M.

Spillways of fishponds. Dokl. AN BSSR 9 no.10:680-682 O '65.
(MIRA 18:12)

1. Belorusskiy politekhnicheskiy institut. Submitted May 18, 1965.

KUNTSEVICH, O.V., kandidat tekhnicheskikh nauk.

Loess as a concrete additive for hydraulic structures. Izv. VNIIG no.45:115-122 '51. (MLRA 10:3)
(Concrete) (Loess)



KUNTSEVICH, O.V.; ALEKSANDROV, P.Ye.; RATINOV, V.B.; ROSENBERG, T.I.; BOGAUTDINOVA, G.G.

Theory of setting of gypsum cements. Dokl.AN SSSR 104 no.4:587-588 O '55. (MLRA 9:2)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut zhelezobetonnykh izdeliy i nerudnykh materialov i Leningradskiy institut inzhenerov zheleznodorozhnogo transporta imeni V.N.Obraztsova. Predstavleno akademikom P.A.Rebinderem.
(Gypsum)

ROSSINSKIY, Ye.Ye., kandidat tekhnicheskikh nauk; KUNTSEVICH, O.V., kandidat tekhnicheskikh nauk

Investigation of mortars and concretes for mixed cements obtained by grinding basalt and portland cement together. Sbor. LIIZHT no.148:134-148 '55. (MLRA 8:10)

(Cement)

SOV/124-57-9-11132

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 173 (USSR)

AUTHORS: Kuntsevich, O. V., Aleksandrov, P. Ye.

TITLE: The Effect of the Dissolution of the Cement Component of a Concrete by Running Water on the Freezing Stability of the Concrete (Vliyaniye rastvoreniya tsementnogo kamnya protochnymi vodami na morozostoykost' betona)

PERIODICAL: V sb.: 15-ya nauchn. konferentsiya Leningr, inzh.-stroit in-ta. Leningrad, 1957, pp 427-428

ABSTRACT: Bibliographic entry

Card 1/1

KUNTSEVICH, O.V.

IOKHEL'SON, Ya.Ye., kand.tekhn.nauk; KUNTSEVICH, O.V., kand.tekhn.nauk.

Technical problems in making high-strength, rapid-hardening concrete. Bet. i zhel.-bet. no.8:325-329 Ag '57. (MIRA 10:10)

(Concrete)

SATALKIN, A.V.; KUNTSEVICH, O.V.

Some problems in the technology of silicalcite materials. Silikaty no.1:100-106 '59. (MIRA 13:2)
(Building materials)

SATALKIN, A.V., prof.; KUNTSEVICH, O.V., dots.; ALEKSANDROV, P.Ye., inzh.; SOKOLOVSKIY, V.I., inzh.

Using high-strength lime-quartz materials in subway construction. Transp.stroi. 9 no.2:43-45 F '59. (MIRA 12:5)
(Leningrad--Subways) (Silicates)

[illegible], V.F. [deceased], prof.; [illegible], G.V., kand.tekhn.nauk

Principles of silicosilcite technology. Sbor. LIIZHT no.157:3-8 '58.
(MIRA 12:11)

(Building materials)

[redacted], O.V., kand.tekhn.nauk, dots.; SAGALKIN, A.V., doktor tekhn. nauk, prof.

Autoclave-hardened concrete made with silicalcite cements. Spor. LIIZHT no.157:9-14 '59. (MIRA 13:11)
(Concrete) (Cement)

KUNTSEVICH, O.V., kand.tekhn.nauk, dots.; KONOKHOV, P.G., assistent

Physical and chemical properties of pressed silicalcite and certain silicalcite products. Sbor. LIIZHT no.157:35-41 '59. (MIRA 13:11)
(Building materials)

ALEKSANDROV, P.Ye., inzh.; KUNTSEVICH, O.V., kand.tekhn.nauk, dotsent

The problem of corrosion of the reinforcement in concrete with additions of salt. Sbor. trud. LIIZHT no.174:177-184 '60.
(MIRA 15:11)

(Concrete reinforcement--Corrosion)

KUNTSEVICH, O.V., kand.tekhn.nauk, dotsent; ALEKSANDROV, P.Ye., inzh.

The effect of surface-active substances on cement stone, mortar and concrete. Sbor. trud. LIIZHT no.174:185-200 '60. (MIRA 15:11)
(Surface-active agents)
(Frost resistant concrete)

KUNTSEVICH, O.V., kand. tekhn. nauk. dotsent

Data on the thermal analysis of hardened cement made with lime-quartz cement. Sbor. trud. LIIZHT no.200:78-88 '62.
(MIRA 16:7)

(Cement—Testing)

KUNTSEVICH, O.V.; ALEKSANDROV, P.Ye.

Effect of the composition of concrete on its resistance to frost. Sbor. trud. LIIZHT no.192:91-109 '62. (MIRA 16:9)

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5283

Author: Aleksandrov, P., Bogautdinova, G., Kuntsevich, S., Ratinov, V., Rozenberg, T., Stalikova, G.

Institution: All-Union Scientific Research Institute of Reinforced Concrete, Leningrad Institute of Railroad Transport

Title: New Testing Methods for Building and Molding Gypsum

Original Publication: Stroit. materialy, izdeliya i konstruktsii, 1956, No 5, 31-33

Abstract: Work conducted by VNIIZhelezobeton and the Leningrad Institute of Railroad Transport, has shown that termination of the processes of hydration and crystallization of gypsum coincide in time. The hardening process is divided into two periods: end of the first is determined, not accurately, by means of the needle of Vick, as "termination of setting," and the end of the second (13-17 minutes) is the "end of crystallization." It is appropriate to evaluate the kinetics of hardening (setting time, end of crystallization) from the value of exothermy or volumetric changes.

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VAKSER, I.I.; STUBAYLO, G.D.; CHISTOVA, V.A.; KRYUCHKOV, G.R., dots., nauchnyy red.; KUNTSEVICH, S., otv. za vypusk; STERZHANOV, P., tekhn. red.

[Public health in the White Russian S.S.R. for forty years (1919-1958); an index to the literature] Zdravookhranenie Belorusskoi SSR za sorok let, 1919-1958; ukazatel' literatury. Minsk, 1961. 500 p. (MIRA 16:7)

1. Minsk. Respublikanskaya gosudarstvennaya nauchnaya meditsinskaya biblioteka.
(WHITE RUSSIA—PUBLIC HEALTH—BIBLIOGRAPHY)
(BIBLIOGRAPHY—WHITE RUSSIA—PUBLIC HEALTH)

BELOV, N.V.; KUNTSEVICH, T.S.; NERONOVA, N.N.

Shubnikov groups (of antisymmetry) for infinite bilateral bands.
Kristallografiia 7 no.5:805-808 S-O '62. (MIRA 15:12)

1. Institut kristallografii AN SSSR.
(Crystallography)

BELOV, N.V.; NERONOVA, N.N.; KUNTSEVICH, T.S.

Drawings showing crystal structures in Shubnikov antisymmetry groups. Kristallografiia 9 no.2:147-154 Mr-Ap'64.
(MIRA 17:5)

1. Institut kristallografii AN SSSR.

CHERNYSH, A.; YANKOVSKIY, L.; KUNTSEVICH, V.; SVETAL'SKIY, B.

Automatic control of motorship engine operations. Rech. transp. 22 no.9:27-28 S '63. (MIRA 16:10)

USENKO, Vladimir Andreyevich, prof., doktor tekhn. nauk; ZABELOTSKIY, Lazar' Markovich, kand. tekhn. nauk; KUNTSEVICH, V.A., inzh., retsenzent; ZVEZDKINA, Ye.V., inzh., retsenzent; IBRAGIMOV, S.S., kand. tekhn. nauk, retsenzent; SHTEYNGART, M.D., red.; BATYREVA, G.G., tekhn. red.

[Silk technology] Tekhnologiia shelka. Pod red. V.A.Usenko. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR. Pt.2. [Silk spinning] Shelkopriadenie. 1961. 343 p. (MIRA 15:2)
(Silk) (Spinning)

KUDOKOTSEV, V.P.; KUNTSEVICH, V.A.

Stimulation of the restorative processes by the method of trypsin and calcium chloride treatment of the surgical wound following amputation of external organs in mammals. Biul. eksp. biol. i med. 60 no.9:106-109 S '65. (MIRA 18:10)

1. Biologicheskiy fakul'tet Khar'kovskogo universiteta.

KUNTSEVICH, V.M.

Calculating the dynamic braking of asynchronous motors of automatic-control systems used in mine hoisting machines. Avtomatyka no.2:21-24 '56. (MLRA 9:10)

1.Institut girnichoi spravi imeni M.M.Fedorova Akademii nauk URSR. (Automatic control) (Mine hoisting) (Elecric motors, Induction)

KUNTSEVICH, V.M.

Analog-to-digital converters (Review) [with summaries in Russian and English]. Avtomatyka no.2:70-87 '57. (MLRA 10:8)

1.Institut elektrotekhniki Akademii nauk URSR.
(Electronic digital computers)

KUNTSEVICH, V.M.; AKININ, P.I.

Approximate methods for determining the frequency and amplitude of hunting in optimalizing controllers [with summaries in Russian and English]. Avtomatyka no.3:56-69 '57. (MIRA 10:10)

1. Institut elektrotekhniki Akademii nauk URSR (for Kuntsevich).
2. Kiivs'kiy ordena Lenina politekhnichniy institut (for Akinin).
(Servomechanisms)

KUNTSEVICH, V. M.: Master Tech Sci (diss) -- "Investigation of systems of regulating inertial production processes". Kiev, 1958. 18 pp (Min Higher Educ Ukr SSR, Kiev Order of Lenin Polytech Inst) (KL, No 12, 1959, 129)

AUTHOR: Kuntsevich, V.M. 102-58-1-5/12

TITLE: The Use of Perturbation Control in Optimalizing Control Systems (Pro vykorystannya regulyuvannya po zburyuyuchikh vplyvakh (kompaunduvannya) v systemakh ekstremal'nogo regulyuvannya)

PERIODICAL: Avtomatika (Kiyev), 1958, Nr 1, pp 50 - 55(Ukrainian SSR)

ABSTRACT: Linear and slightly non-linear peak-holding control systems can often be rendered much less sensitive to perturbations by employing perturbation control; this type of control supplements ordinary proportional deviation control and can also be used with peak-holding (extremal) controls. The transients to be expected in a particular system (maintenance of maximum load torque in an asynchronous motor) are illustrated for cases where combined (derivative and proportional) perturbation control is used and when a simple linear proportional perturbation control loop is closed or open. It is shown that the first is much the most effective method. There are 4 Soviet references and 3 figures.

ASSOCIATION: Instytut elektrotekhniky AN URSR (Institute of Electrical Engineering, Ac.Sc. Ukrainian SSR)

SUBMITTED: September 26, 1957

Card 1/1

AUTHOR: V.M. Kuntsevich SOV/102-58-2-5/)

TITLE: An approximate frequency method of studying peak-holding sampled-data control systems (Nablyzhennyy chastotnyy metod doslidzhennya ekstremal'nykh system impul'snoho rehulyuvannya) *

PERIODICAL: Avtomatyka, 1958, No.2, pp 48-64 (USSR)

ABSTRACT: After a short general review of the difficulties of analysing such systems, particularly if nonlinear links are present, detailed consideration is given in section 1 to the structural diagram of stepping type peak-holding control systems (Fig.1b; Fig.1a. is a very generalized structural diagram). The time between samplings is assumed much larger than the duration of the transients. Units 3. and 4. are memory units (stores) which record the previous value of the controlled co-ordinate and 5 is a summator; 6 is a sampler; 7 is the effector motor, operated by the sign of the difference between the current and previous values. A backlash of 2Δ is assumed in 6. The reader is referred to ref.(1) for a detailed treatment of such systems. The equations for the system are then given (eqs. (1) - (5)). Systems which oscillate (hunt) about the peak are assumed. In relation to Fig.2 (open-loop system). The second section deals with the self-oscillation frequency and frequency characteristics of

* Paper presented at the seminary on the theory of automatic regulation, Kiyev, 1957.

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An approximate frequency method of studying peak-holding sampled-data control systems.

the system. Equations (8) and (8a) relate to the input and output of the nonlinear link; only the steady state is considered and the pulse sequence is expanded as a Fourier series (eq. (9)). Equations (10) give the amplitude of the fundamental (approximately), provided all transients die away in between samplings; otherwise large errors result. The hodographs of Fig.3. are then introduced. Some detailed cases are then considered, in case 1 eq. (3) is replaced by (12). Fig.4. gives the frequency curves implied by eqs. (14) and (15). The optimum interval between samplings is then considered, in relation to Fig.4 , and stepping regulators are shown to provide better control than continuous-acting ones, particularly for controlled objects of high inertia. Fig.5. illustrates the variations in the optimum sampling frequency, oscillation amplitude etc. It is stated (but not proved) that it is easy to incorporate the third harmonic term also. Section 3 then deals with ways of improving the response of stepping-type peak-holding systems. It is shown that one can reduce the search loss by Tsypkin's continuous correction method (ref. (2)) without having to increase the gain. Fig.6. represents a system in which the feed -back of the sign of any change via link 8 involves a lag (direct simple feedback produces no improvement); detailed consideration is given to Fig.7. The Fourier expansion, neglecting all harmonics, is applied as

An approximate frequency method of studying peak-holding sampled- SOV/[illegible] 3/10
data control systems.

before (eq. (18)), and the development is as before, eq. (21) gives the amplitude of the oscillation in the feed-back link. Fig.9. deals with the choice of feedback parameters to give a present oscillation amplitude. The paper contains 22 numbered equations, 9 figures, and 14 references, 9 of which are Soviet and 2 Ukrainian.

ASSOCIATION: Instytut Elektrotekhniky AN URSR (Institute of Electrical Engineering Ac. Sc. Ukrainian SSR)

SUBMITTED: September 15, 1957.

1. Data--Analysis 2. Control systems--Analysis 3. Control systems --Equipment

Card 3/3

SOV/102-58-3-2/10

AUTHORS: Kryzhanovs'kyy, O.M. (Krizhanovskiy, O.M.) and Kuntsevych, V.M. (Kuntsevich, V.M.)

TITLE: Analysis of Extremal Control Systems from the Transients which Occur in Them (Analiz system ekstremal'nogo regulyuvannya za dopomohoyu doslidzhennya perekhidnykh protsesiv u nykh).

PERIODICAL: Avtomatika (Kyiv), 1958, Nr.3, pp.23-43 (USSR)

ABSTRACT: Extremal systems with only one maximum are considered. The transients occurring when the system passes instantaneously from the characteristic 1 of Fig.2a to characteristic 2 are considered. The actual change is assumed small, so the shapes of the curves can be approximated by parabolas. The extremal systems shown structually in Fig.2 are then considered. The servomotor, linear link in the controlled object, nonlinear extremal characteristic (2 of Fig.1) and direct sensing link are represented by equations (1) - (4), where the α's are constants and dots denote time derivatives. The system is assumed at rest at A of Fig.1 before perturbation; Eq.(5) is derived in the usual way and the analysis follows the standard course. The result is to

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reduce the equations to a linear differential equation. Relay control systems are studied by phase - plane methods in para.2; Eq.(9) replaces Eq.(4). Fig.3 shows the phase trajectories corresponding to Eqs.(12a) and (12b). An extremal system of control law described by Eq.(13) is then considered; Δ is the width of the hysteresis loop shown by a two-position polarized relay. Fig.4 shows the phase trajectories; Eq.(12a) applies to the right of line EFGH, Eq.(12b) to the left of it. The system of Fig.2b of control law Eq.(14) is now considered; its phase trajectories (Fig.5) show that it cannot work. Fig.6 is now considered (this has direct feedback of $\dot{x}$). The control law is Eq.(15); Fig.7a shows the phase trajectories, etc. If x is not readily obtained for this purpose, the linear part of the circuit of the controlled object may be altered; the effect of this becomes smaller as the hysteresis loop of the lower relay in Fig.6 becomes wider; a time delay in the top relay is only required. Figs.2c and 2d show possible ways of deriving x if x is not directly accessible.

Analysis of Extremal Control Systems from the Transients which Occur in Them.

Various methods of improving the transient behaviour are discussed in para.3; a new way involving introducing terms containing $\dot{x}$ into the control law is proposed (this involves no special technical difficulties). Eq.(22) now replaces Eq.(4); this is briefly discussed. The control law of Eq.(24) is now introduced (Fig.8a is a system following this law; the other sections of Fig.8 relate to Eqs.(31), (32) and (32a) respectively, which are also control laws. Fig.9 shows the phase trajectories corresponding to Eq.(24), and Fig.10 those for Eq.(27); Fig.11 similarly relates to Eqs.(32) and (32a). Eqs.(36) relate to the transients corresponding to Eq.(31). An object with a characteristic which can be approximated by sections of straight lines is considered in para.4; the treatment uses the results of the earlier sections. Fig.12a relates to the control law of Eq.(43), with the characteristic approximated as in Eq.(39); Fig.12b does the same for the control law of Eq.(32). Para.5 deals with transients in extremal control systems using the Krylov-Boglyubov method for nonlinear

Analysis of Extremal Control Systems from the Transients which Occur in Them.

differential equations. Fig.13 relates to the control law of Eq.(32); the full line is derived from Eqs.(65) and (66), which are approximate and the broken one from Eqs.(37a) and (37b). Para.6 deals briefly with approximating an unsymmetrical extremal characteristic by a cubic, i.e. by Eq.(69). There are 13 figures and 18 references, of which 12 are Soviet and 6 English.

ASSOCIATION: Instytut hirnychoy spravy im. M.M. Fedorova AN URSR (Institute of Mining Inspectorate im. M.M. Fedorov, Academy of Sciences, Ukr.SSR); Instytut elektrotekhniky AN URSR (Institute of Electrical Engineering, Academy of Sciences, Ukr.SSR).

SUBMITTED: April 15, 1958.

Kunisevich, V.M.

PHASE I BOOK EXPLOITATION SOV/4526

Soveshchaniye po teorii invariantnosti i yeye primeneniyu v avtomaticheskikh ustroystvakh. Kiyev, 1958

Teoriya invariantnosti i yeye primeneniye v avtomaticheskikh ustroystvakh; trudy soveshchaniya (Theory of Invariance and Its Applications to Automatic Devices; Transactions of the Conference Oct. 16-20, 1958) Moscow, 1959. 381 p. No. of copies printed not given.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Otdeleniye tekhnicheskikh nauk.

Resp. Ed.: V.S. Kulebakin, Academician; Editorial Commission: V.A. Bodner, Doctor of Technical Sciences, A.G. Ivakhnenko, Doctor of Technical Sciences, A.Yu. Ishlinskiy, Academician, Academy of Sciences UkrSSR, N.A. Kachanova, Candidate of Technical Sciences, P.I. Kuznetsov, Doctor of Physics and Mathematics, A.I. Kukhtenko, Doctor of Technical Sciences, B.N. Petrov, Corresponding Member, Academy of Sciences USSR, Ye.P. Popov, Doctor of Technical Sciences, G.M. Ulanov, Doctor of Technical Sciences, K.K. Khrenov, Academician, Academy of Sciences UkrSSR, P.I. Chinayev, Candidate of Technical Sciences, and N.M. Chumakov, Candidate of Technical Sciences; Tech. Ed.: G.V. Kruglov.

PURPOSE: This collection of papers is intended for engineers and other specialists working in various fields of automation.

COVERAGE: The collection includes reports and papers presented at the Conference on the Theory of Invariance and Its Applications to Automatic Devices, which was called by the Otdeleniye tekhnicheskikh nauk (Department of Technical Sciences) and the Institut elektrotekhniki (Institute of Electrical Engineering) of the Academy of Sciences of the Ukraine and convened in Kiyev October 16 - 20, 1958. The papers presented are concerned with high-quality automatic control systems designed on the basis of compensating for the effects of disturbances or maintaining the invariance of the quality to be regulated with respect to the disturbances acting on the system. The reports treat the physical and mathematical foundations of invariance in automatic control systems; they also consider methods for designing and calculating invariant systems and problems connected with specific cases of practical applications of compensation in various automatic systems. On the basis of these reports it was established by the Conference that, by utilization of the conditions of compensation and the principle of invariance, it is possible to produce automatic systems and various arrangements which are more perfect from the viewpoint of quality of the regulation and control process, stability, simplicity of construction, and reliability of operation. The following members of the Kiyev Seminar on Automatic Control are mentioned as organizers of the conference: A.I. Kukhtenko, A.G. Ivakhnenko, Yu.G. Kornilov, O.M. Kryzhanovskiy, N.M. Chumakov, N.A. Kachanova, and P.I. Chinayev. References accompany each article.

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8

SOV/24-59-3-6/33

AUTHORS: Kryzhanovskiy, O. M. and Kuntsevich, V. M. (Kiyev)

TITLE: Transients in Peak-Holding Control Systems.

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 3, pp 32-42 (USSR)

ABSTRACT: The paper presented by the authors in Avtomatika, 1958, Nr 3 (Ref 12) is reproduced in slightly condensed form (it now contains only 9 figures, but the equations have all been numbered and amount to 56). There are 13 references, 4 of which are English and the rest Soviet.

SUBMITTED: February 23, 1959.

Card 1/1

S/194/61/000/002/011/039
D216/D302

16.8000

AUTHOR: Kuntsevich, V.M.

TITLE: A study of extremal sampled data control systems with pulse and digital elements

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 2, 1961, 32, abstract 2 V245 (V sb. Teoriya i primeneniye diskretn. avtomat. sistem, M., AN SSSR, 1960, 425-445)

TEXT: A study of transient oscillation around the position of the extremum in an extremal system ЭС (ES). Transients in a relay continuous ES are analyzed in the phase plane. The shape of oscillations of the controlled quantity in the sampled data ES differs little for given settings from that of oscillations in continuous systems. Circuits of sampled data ES of control are given and oscillating states of their operation are analyzed. A description is given of an extremum regulator of the sampled data type with digital computing arrangements. 24 references.

Card 1/1

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S/024/60/000/01/011/028
E081/E335

AUTHOR: Kuntsevich, V.M. (Kiyev) 9

TITLE: A Peak-holding Control System Subject to a Random Input

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, Nr 1, pp 90-101 (USSR)

ABSTRACT: The paper presents a summary of three papers by Ivakhnenko and Kuntsevich in Avtomatika (Ukrainian) in 1958 and 1959. The system is one in which a small-amplitude harmonic perturbation is used (in conjunction with a phase-sensitive detector) to establish the size and sense of the deviation from the peak. The essential features of the random quantities A_n and B_n are indicated by Eq (1.13) (in each case the mathematical expectation is zero). The stability in the open-loop state is examined; the error is presented as a function of signal-to-noise ratio (Figure 3).
The second section deals with a similar system, which has two harmonic perturbations differing in frequency (and two phase-sensitive detectors). The stability of that system is examined similarly for a system whose

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A Peak-holding Control System Subject to a Random Input

perturbations have frequencies in the ratio 1:2. The third section deals with the stability in the closed-loop state; here the discussion is less rigorous. The last section presents a simple example. There are 5 figures and 13 references, 12 of which are Soviet and 1 is English.

SUBMITTED: October 2, 1959

Card 2/2

KUNTSEVICH, V.M.

S/102/60/000/02/04/005
C111/C222

9,4310

AUTHORS: Vasil'yev, V.I., and Kuntsevich, V.M. (Kyyiv)

TITLE: Contactless Synchronous Relay Type Detector for Infra-low Frequencies

PERIODICAL: Avtomatika, 1960, No.2, pp. 73-75

TEXT: The present paper contains a description of a contactless synchronous detector with transistors projected in the Laboratory of Automatic Control of the Institute of Electrical Engineering of the Academy of Sciences Ukr.SSR. The detector shall be used for extremal systems. The connection between the input magnitude and output magnitude is the same as for contact circuits. Triodes of the type P6A are used. Experiments have shown that only triodes with equal characteristics shall be used.
There are 4 figures.

SUBMITTED: January 15, 1960

Card 1/1

KUNTSEVICH, V.M.

S/102/60/000/002/007/008/XX
D251/D304

AUTHORS: Zeydel', K.H. (L'viv), and Kuntsevych, V.M. (Kyyiv)

TITLE: The use of an extremal regulator for the automatic dosage of lime in chemical water-purifiers

PERIODICAL: Avtomatyka, no. 2, 1960, 76-80

TEXT: The authors propose a new principle for automatic lime regulation which they claim will guarantee an optimum liming regime with variable hardness of the water. The principle is based on the automatic maintenance of minimum electrical conductivity in the water with the help of an extremal regulator using a conductometric sensor. The theoretical bases of the method are the chemical reactions

$$Ca(HCO_3)_2 + Ca(OH)_2 \rightarrow 2Ca\downarrow CO_3 + 2H_2O$$

$$CO_2 + Ca(OH)_2 \rightarrow Ca\downarrow CO_3 + H_2O$$ The conductivity varies

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The use of an extremal ...

in direct proportion to the number of OH^- and Ca^{++} ions, hence minimum conductivity implies maximum precipitation. There are two basic schemes of regulation. In the first the extremal regulator is applied to the direct variation in the loss of lime. This scheme has certain faults which, the authors claim, are avoided in the combination-type scheme. This latter scheme is illustrated in a figure. The authors claim that with this combination-type apparatus a liming regime close to the optimum may be maintained. Engineer E.K. Svetal'skiy and Senior Mechanic V.V. Korochinskiy participated in work on the regulator. There are 4 figures.

[illegible]

Card 1/1

8h283

13.2000

S/102/60/000/003/004/006
C 111/ C 333

AUTHORS: Kuntsevych, V. M., Vasyl'yev, V. J. (Kyyiv)

TITLE: New Schemes of Extremum Controllers of the Step Type

PERIODICAL: Avtomatika, 1960, No. 3, pp. 31-37

TEXT: This paper present a description of two schemes of extremum controllers of the step type developed in the automatic control laboratory of the Instytut elektrotekhniki AN URSR (Institute of Electrical Engineering of the Academy of Sciences of the Ukrainian SSR). Without differing from the existing extremum controllers by the law of regulation which is utilized, the new controller schemes differ advantageously from them constructively, inasmuch as their contact elements are almost completely replaced by contactless elements in order to raise the reliability of operation.

The controller schemes described in this paper are designed chiefly for controlling objects to be regulated with great inertia and (or) with great delay. The control period of the controllers may be gradually altered from 0 to 8 or 9 minutes.

The first of the described controllers is a controller of the relay type having a law of regulation

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S/102/60/000/003/004/006
C 111/ C 333

New Schemes of Extremum Controllers of the Step Type

$$(1)\quad \begin{cases} u = a_o \operatorname{sign} (\bar{\varphi}_n - \bar{\varphi}_{n-1})\, u_{n-1} & \text{for } nT \leqq t \leqq (n+\gamma)T \\ u = 0 & \text{for } (n+\gamma)T \leqq t \leqq (n+1)T, \end{cases}$$

where γ = const is the impulse width, T control period, φ_n, φ_{n-1} values of the controlled variable averaged over T taken at the origin of the n - 1 and n periods of the control, u voltage of the impulse element, while in the second extremum controller latitude-impulse modulation - law of regulation (1),

$$(3a)\quad \gamma \approx \gamma_o + a\,|\bar{\varphi}_n - \bar{\varphi}_{n-1}| \quad \text{for } \operatorname{sgn} u_n = \operatorname{sgn} u_{n-1}$$

and

$$(3b)\quad \gamma = \gamma_o \quad \text{for } \operatorname{sgn} u_n \neq u_{n-1}$$

where γ_o = const - is used for improving the quality of the controll process.

The described controllers ensure the required change of sign of the regulating effect with a change in voltage u_φ proportional to the extremum index by $\sim$ 0.15 v (with change in u_φ ranging from 0 to 5 v).

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S/102/60/000/003/004/006
C 111/ C 333

New Schemes of Extremum Controllers of the Step Type

B. K. Svetal'skyy, engineer is mentioned in the paper.

There are 5 figures, and 2 Soviet references.

SUBMITTED: April 20, 1960

Card 3/3

KUNTSEVICH, V.M.

S/102/60/000/004/002/006
D251/D304

16.8000

AUTHORS: Kostyuk, V.I., Kuntsevych, V.M., and Mandrovs'kyy-Sokolov, B.Yu.

TITLE: On the work of S. Chang "Application of the z-transformation method for optimization of self-adjusting systems"

PERIODICAL: Avtomatyka, no. 4, 1960, 14 - 31

TEXT: An outline is given of the above-named work of S. Chang (Ref. 1: AIEE Conference Paper, NCP, 59-1296) in which two kinds of systems are considered: The derivative sensing system and the alternate biassing system. The authors consider Chang's work in relation to other investigators, in particular V.V. Kazakevich (Ref. 24: Sistemy ekstremal'nogo regulirovaniya i nekotoryye sposoby uluchsheniya ikh kachestva (Systems of Extremal Control and Some Methods of Improving Their Properties) sb. Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, pod. red. V.V. Solodognikova, Mashgiz, 1958) and O.M. Kryzhanovs'kyy and V.Ya. Soltyk (Ref. 22: Av-

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On the work of S. Chang ...

tomatyka, no. 4, 1960). The author state that the results of Chang and Kryzhanovs'kyy and Soltyk, despite different methods of approach, are of the same form. Attention is drawn to the resemblance between block-diagrams of the two methods and the fact that both recommend the derivative sensing system with a weighted sum of all previously measured values of the figure of merit (cost function). It is shown that these systems give an advantage in noise stability only in the case of slowly-changing perturbances. The authors state that there is no practical difficulty in constructing Chang's schemes in practice, but that certain of his basic statements and assumptions need further clarification. There are 11 figures, 4 tables and 24 references: 7 Soviet-bloc and 17 non Soviet-bloc. The 4 most recent references to the English-language publications read as follows: T.P. Goodman, R.H. Hillsley, Continuous self-measurement of characteristics of systems with random inputs. A step towards self-optimalizing control, ASME Paper, 58-IRD-5, 1958; G.W. Anderson, J.A. Aseftine, A.R. Mancini, C.W. Sature. A self adjusting system for optimum dynamic performance, IRE National Convention Record, Part 4, 1958; J.E. Bertram, Control by stochastic adjust-

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On the work of S. Chang ...

ment, AIEE Winter meeting, Conference Paper, Febr. 1959; R. Staffin, Executive-Controlled adaptive systems, AIEE Winter Meeting, Conference Paper, Febr. 1959.

SUBMITTED: May 20, 1960

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KUNTSEVICH, V.M.(Kiyev)

Concerning the theory of experimental step-by-step systems. Izv.AN SSSR. Otd.tekh.nauk. Energ. i avtom. no.5:68-76 S-O '60. (MIRA 13:11)

(Automatic control)

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16.9500 (1024, 1031, 1344)

AUTHOR: Kuntsevich, V.M. (Kiyev)

TITLE: Certain Problems in the Theory of Stepping Extremum Regulators

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.5, pp.77-86

TEXT: Although the study of extremum regulators with continuously shifting point of extremum is at least as important as the investigation of such systems with impulse disturbances, there are as yet no rigorous investigations of such systems with stepping structures. This article considers transient processes in such systems of various types and considers questions of improving their quality. It is assumed that all computations required in the system are carried out instantaneously. It is also assumed in the present work that the systems investigated have constant control period T. The problem is first solved for an extremum point which is displaced by an impulse disturbance remaining fixed after the disturbance and then this restriction is lifted. The equation of the closed-loop control system is found in the form of a linear second-order finite-difference equation. According to the

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Certain Problems in the Theory of Stepping Extremum Regulators

character of the roots the system should arrive at the point of extremum, perhaps carrying out a damped oscillation. It was assumed that the computer built into the system can divide. Further, a variant is discussed in which division is not required. The author mentions his previous work (Ref.10) describing a transistor realization of such a machine operating reliably. It is pointed out that these systems may be improved by using pulse-width modulation. This permits a simple control circuit without division and obtaining transients close to those in the linear case. In another paper by the same author (Ref.5) an extremum control using continuously acting circuits was described using a corrective network introducing the first difference of the x-coordinate into the linear system. For systems containing non-linear circuits with extremum characteristics and a linear circuit with high inertia, an improvement may be obtained by introducing an additional term proportional to the second difference of the extremum position. With an extremum position varying continuously at constant velocity, the variation of the controller output compensating this will take place at the same velocity but with a velocity error. This is