UKRAINTSEV, F. I.

SOV/89-5-3-7/15

AUTHORS: Laypunskiy, A. I., Abramov, A. I., Andreyev, V. K., Bu.yannikov, A. I., Bondarenko, I. I., Galkov, V. I., Golubev, V. I., Gal'ko, A. D., Guseynov, A. G., Kazachkovskiy, O. D., Kozlova, A. V., Krasnoyarov, N. V., Kuz'minov, B. D., Morozov, V. N., Nikolayev, M. N., Smirenkin, G. N., Stavisskiy, Yu. Ya., Ukraintsev, F. I., Usachev, L. N., Fetisov, N. I., Sherman, L. Ye.

TITLE: Investigations of the Physics of Reactors With Fast Neutrons. II (Issledovaniya po fizike reaktorov na bystrykh neytronakh) (Continued from abstract 6/15)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 3, pp. 288-295 (USSR)

ABSTRACT: The reactivity and the kinetics of the reactor were measured. It could be shown that in the center of the active zone the weight of the 5 MeV neutrons is higher by ~15% than that of 250 MeV neutrons. The effective yield of the delayed neutrons in the reactor with a uranium shield exceeds that of a reactor with a copper shield by 1,4 times its amount.

Reactor БР 5:

The active plutonium zone is the same as in reactor БР-1. In the center of the reactor a water-uranium channel is provided, which is separated from the plutonium zone by a uranium layer

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of 8 cm thickness. The uranium-water lattice consists of cylindrical slugs of normal uranium, which have a diameter of 35 mm. The canning material is aluminum. The ratio between water and uranium is 0,55. The lattice spacing is 40 mm. Measurements carried out with the water-uranium lattice instead of with the pure uranium layer showed:

1) The conversion factor is reduced from 2,45 ± 0,10 to 1,7 ± 0,2.

2) In the case of a fixed power output of the active zone the velocity with which the total quantity of plutonium 239 and uranium 235 is formed was increased by 35%.

3) The velocity with which plutonium is produced increased by 1,8 times its amount.

4) In the case of a fixed power output of the active zone the total power output of the reactor is increased by 2,2 times its amount.

Reactor БР-2:

This reactor was described more in detail in references 12 and 13. Its nominal power output is 120 kW, the maximum output is 200 kW. In the active zone of the reactor БР-2, which consists of plutonium rods, mercury is used as a coolant, which takes up

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~17% of the total volume of the active zone. The regulating rods (interior of shield) are made from a copper-nickel alloy. The external shield consists of uranium slugs canned with stainless steel. Thickness ~25 cm. The uranium shield is surrounded by copper of 15 cm thickness.

The presence of mercury in the active zone leads to a decrease of the content of fast neutrons in the spectrum. The conversion factor was 1,6 ± 0,2.

Theoretically the kinetic equation for this reactor was calculated by G. I. Marchuk according to the method developed by V. S. Vladimirov. Theoretical calculation of the critical mass was carried out with an error of 4%, and that of the effectiveness of the regulating rods with an error of 6%. The effective yield of the delayed neutrons was found to amount to 0,27%, while the experimental value was 0,24 ± 0,04%. There are 7 figures, 1 table, and 13 references, 9 of which are Soviet.

Card 3/3

UKRAINTSEV, F. I.

21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.F. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Moryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

PART II. EXPERIMENTAL AND RESEARCH REACTORS

PART III. PHYSICS AND ENGINEERING OF REACTOR DESIGN

199

UKRAINTSEV, F. I., USACHEV, L.N., LEYPUNSKIY, A. I., KAZACHKOVSKIY, O. D., AGRAMOV, A. I., ALEKDANDROV, Y. A., ARISTARKHOV, N. N., BONDARENKO, M. S., SMIRENKIN, G. N., STAVISSKIY, Y. Y., SALNIKOV, O. A.,

Physical charactistics of the BR-5 reactor

report submitted for the IAEA Seminar on the Physics of Fast and Intermediate Reactors, Vienna, 3-11 August 1961
(report presented by G. I. Marchuk)

Acad. Sci. USSR, Moscow

15

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S/089/61/010/005/001/015
B102/B214

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AUTHORS: Blokhin, G. Ye., Blokhintsev, D. I., Blyumkina, Yu. A., Bondarenko, I. I. Deryagin, B. N., Zaymovskiy, A. S., Zinov'yev, V. P., Kazachkovskiy, O. D., Kim Khen Bon, Krasnoyarov, N. V., Leypunskiy, A. I., Malykh, V. A. Nazarov, P. M., Nikolayev, S. K., Stavisskiy, V. Ya., Ukraintsev, F. I., Frank, I. M., Shapiro, F. L., Yazvitskiy, Yu. S.

TITLE: A pulsed fast reactor

X

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 437-446

TEXT: The present paper gives a description of the pulsed fast reactor of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) which became critical in June, 1960. This reactor, called ИБР (IBR) reactor, serves as pulsed fast neutron source (mean power ≈1 kw) for physical investigations, particularly for time-of-flight experiments. Its most distinguishing feature is the very small contribution (~10^{-4}) of the delayed neutrons in its normal operation; it is about

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one hundredth of that of the usual steady uranium reactor. The pulses appear because whenever the reactor becomes overcritical a burst of prompt neutrons results. The half width of these pulses is 36 μsec. The frequency with which the pulses are repeated can be varied between 0 and 60 pulses/sec. Fig. 2 shows the construction of this reactor. The periodic change in the reactivity is brought about by the displacement of the two U^{235} blocks placed in two disks that can be rotated. The main block is pressed in the form of a disk, 1100 mm in diameter, and can be rotated with a peripheral velocity of 276 m/sec (at 6000 rpm) during which it passes through the core center. The reactivity change obtainable from the motion of the main block is 7.4 %, that obtainable from the motion of the auxiliary block is 0.4 %. The stationary part of the core consists of plutonium lumps in steel jackets. The reactor is started by a rough regulator, in this case a movable part of the reflector. It gives a reactivity change at the rate of $13 \cdot 10^{-5} - 1.3 \cdot 10^{-5}$ sec^{-1}. The manually operated rod is also a part of the reflector. Two plutonium rods in electromagnetic suspension serve as scram. They can be separated from the core with an acceleration of 20 g. Their separation causes a reactivity

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A pulsed fast reactor

decrease of 2-1.1 %; the rough regulator allows a reactivity change of 2.4 %, the manual regulator 0.1 %, and the automatic regulator 0.036 %. The reactor possesses also a reactivity booster for the production of one intensive pulse. The control and shield system is an automatically functioning electronic arrangement with BF_3 counters and ionization chambers. The whole reactor is placed in a room of size 10·10·7 m whose concrete walls allow complete protection from radiation. The most important experimental arrangement consists of a 1000 m long neutron conductor, a metal tube, 400 mm in diameter in the first part and 800 mm in the second part in which a pressure of 0.1 mm Hg is maintained. This conductor connects a chain of socalled "intermediate pavilions" (at distances of 70, 250, 500, 750, and 1000 m from the reactor) in which experiments can be carried out. There is also an additional neutron conductor of 100 m length. The reactor chamber is joined to an experimental chamber in which four neutron beams of up to 800 mm diameter are available. There us such an experimental chamber also above the reactor chamber. Various experiments were carried out with the reactor and they are described in the present paper. These are experiments with stand

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A pulsed fast reactor

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assemblies and slowly moving main block for the determination of the most important parameters of the reactor; experiments with a core assembly (unmoved), experiments with rotating (5000 rpm) main block and a Ra-α-Be source in the core for the investigation of the effect of the multiplication factor, etc. The most important results are represented graphically. For example, Fig. 8 shows the dependence of the half width θ of a pulse on the reactivity; the dashed line holds for the quasistationary case, the dot-dash line for the case of $\theta = K(\tau/\alpha)^{1/3}v^{-2/3}$, where v is the velocity of motion of the (rotating) main block; in the quasistationary case $\theta = 2\sqrt{\varepsilon_m/\alpha v^2}$, where ε_m is the reactivity at the maximal multiplication factor; $\varepsilon = \varepsilon_m - \alpha x^2$, where x is the displacement of the main block. The reactor has been actually used for the measurement of the total, scattering, capture, and fission cross sections by the time-of-flight method. Further experiments will be carried out with a view to obtaining increase of power and decrease of the pulse duration. There are 15 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Orndorf, Nucl. Sci. and Engng, 2, No. 4, 450 (1957).

Card 4/4

UKRAINTSEV, M.

On the eve of the 21st Congress of the CPSU. Sel'.stroi. 13 no.12:4-5 D '58. (MIRA 12:1)

1. Nachal'nik Novozybkovskogo rayonogo otdela po stroitel'stvu v kolkhozakh Bryanskoy oblasti.
(Novozybkov District--Farm buildings)

[illegible] EEO-2/EWT(d)/EES-2/EEC(k)-2/EWG(v)/EED-2/FS(b) Pn-4/Po-4/Pe-5/Pq-4/

[illegible]

TITLE: How to decrease gyroscope errors

SOURCE: Vestnik protivovozdushnoy oborony, no. 8, 1964, 65-67

[illegible]

ABSTRACT: Sources of errors in gyroscope systems and possible means for decreasing [illegible]

[illegible] relative to the axis of rotation [illegible]

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ACCESSION NR: AP5002006

principal axes) is to decrease the sensitivity. The minimum angular velocity which

flexible power and pickup leads or point contact along the axis of rotation serves

ASSOCIATION: none
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L 21417-65
ACCESSION NR: AP5002006

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ENCL: 00

SUB CODE: NC NR REF SOV: 000 OTHER: 000

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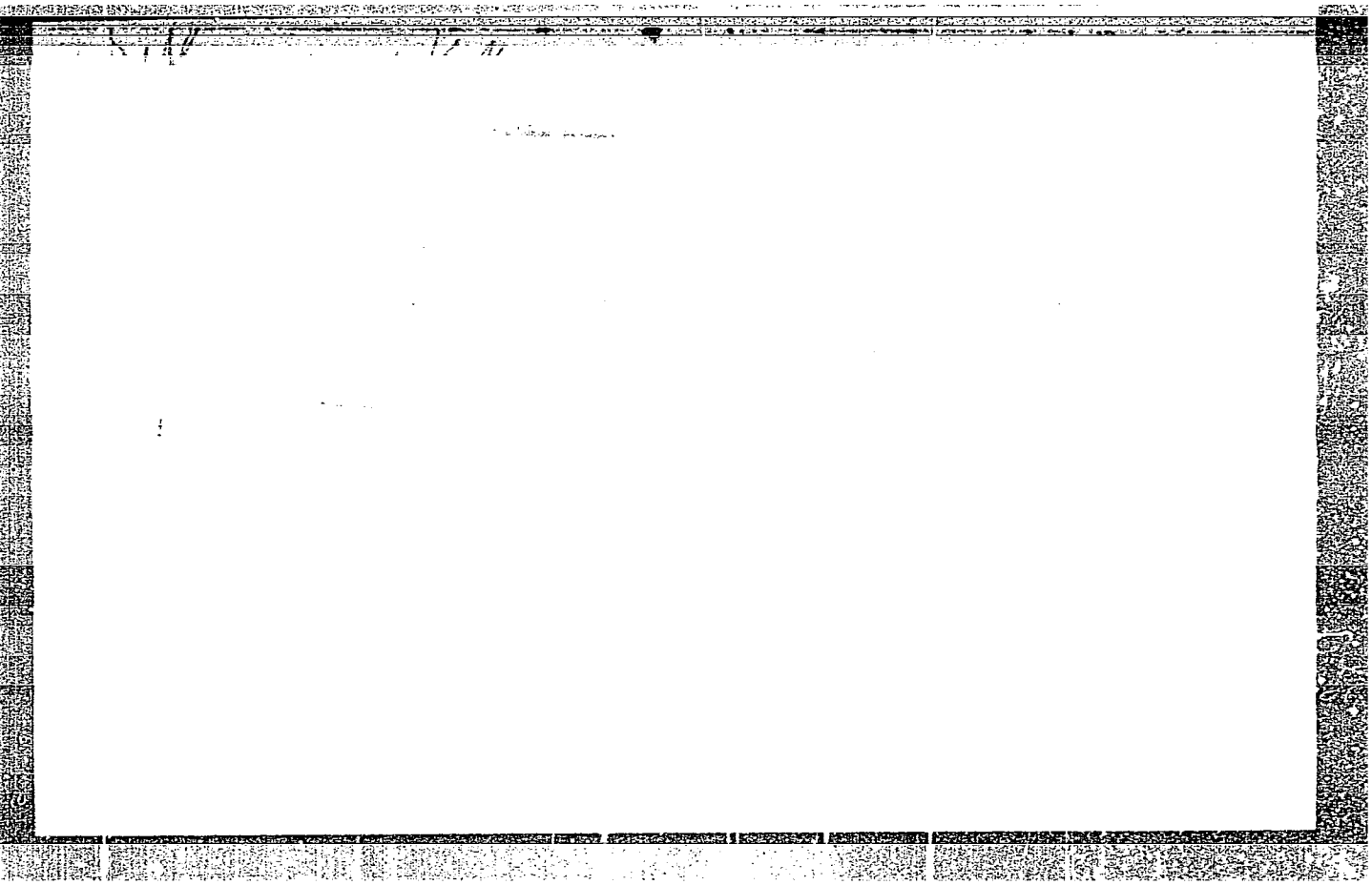

UKRAINTSEV, Ye.F., assistent

Rheumatic heart defects in pregnancy. Akush. i gin. 38 no.5: 20-27 S-O '62. (MIRA 17:11)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. I.T. Mil'chenko) i fakul'tetskoy terapevticheskoy kliniki (zav. - zasluzhennyy deyatel' nauki RSFSR prof. N.Ye. Kavetskiy) Kuybyshevskogo meditsinskogo instituta.

S/186/62/004/003/005/022
E071/E433

AUTHORS: Ukraintsev, Ye.V., Kashcheyev, N.F. (deceased)

TITLE: The extraction of microquantities of cerium from nitric acid solutions with di- and monoisoamyl esters of methylphosphonic acid

PERIODICAL: Radiokhimiya, v.4, no.3, 1962, 279-289

TEXT: In order to elucidate the mechanism of extraction of inorganic nitrates with neutral and acid extracting agents the authors investigated the extraction of trivalent Ce^{144} (used in indicator quantities) with isoamyl esters of methylphosphinic acid. The extraction was done by mechanical mixing in graduated test tubes at 20 ± 2°C and a constant ionic force of about 2. On extraction with diisoamyl ester of methylphosphinic acid (DAMFK) the constants of complex formation were determined: for benzene and xylene as diluents 12 ± 3 and for kerosene 62 ± 1.5. The thermodynamic constant for benzene as a diluent was determined as being about 30 to 40. The mechanism of the extraction of cerium with monoisoamyl ester of methylphosphinic acid (MAMFK) in the form of a complex

$Ce(NO_3)(MAMFK^-)_2 \cdot (MAMFK)$ was proposed. The reaction constant was calculated (0.126 ± 0.002). The influence of the concentration of nitric acid, thorium nitrate and NO_3^- ion in the aqueous phase on the distribution of cerium was studied. A sharp decrease in the coefficient of distribution of cerium in the presence of thorium nitrate was observed. On examining the influence of the presence of mono ester in diester on the extraction of cerium, it was established that the presence of the former increases the extraction of cerium, probably due to synergetic effect. At low acidities, the effect is considerable. The form of the dependence of the activity coefficients of trivalent cerium in nitric acid solutions on the concentration of nitric acid was determined. A sharp decrease of activity coefficients with increasing concentration of nitric acid indicates the prevalence of interactions of the type of ionic associations. There are 10 figures and 5 tables.

SUBMITTED: March 21, 1961

Card 2/2

L 36059-66 EWT(m)/EWP(t)/ETI IJP(c) ES/JD/WW/JG

ACC NR: AP6014722 (N) SOURCE CODE: UR/0186/65/007/006/0641/0648

AUTHOR: Ukraintsev, Ye. V.

33
B

ORG: none

27 27

TITLE: Mechanism of the extraction of thorium and uranium by the mono- and diisoamyl esters of methyl phosphonic acid

SOURCE: Radiokhimiya, v. 7, no. 6, 1965, 641-648

TOPIC TAGS: solvent extraction, thorium, uranium, phosphonic acid

ABSTRACT: The extraction was done from solutions of nitric acid. Indicators for the extraction were UX_1 and U^{233}. It is shown that the extraction of thorium with the diisoamyl ester of methyl phosphonic acid is accompanied by the formation in the organic phase of di- and trisolvates, whose effective formation reaction constants are equal, respectively to 5.75×10^3 and 3.1×10^4, at a constant ionic strength equal to approximately 2. It is proposed that the mechanism of the extraction of thorium and uranium by the monoisoamyl ester of methyl phosphonic acid involves the formation of the complexes $UO_2 \cdot (\text{monoisoamyl ester of methyl phosphonic acid}^-)_2$ and $Th \cdot (\text{monoisoamyl ester of methyl phosphonic acid})_4$. The calculated reaction constants for the formation

Card 1/2 UDC: 542.61:546.791.6:546.841

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ACC NR: AP6014722 O.

of these complexes were equal, respectively to $3.2 \times 10^3 \pm 250$ and $4.75 \times 10^5 \pm 350$, at an ionic strength of about 2. Extraction of uranium and thorium with the monoisoamyl ester of methyl phosphonic acid was applied to dilute solutions (10^{-4} - 10^{-5} M). In this case, the coefficient for the separation of thorium from uranium was determined by the equation $\beta = (148 \pm 1.4) \times ([\text{monoisoamyl ester of methyl phosphonic acid}] / [H^+])$. Orig. art. has: 10 formulas, 4 figures and 5 tables.

SUB CODE: 07/ SUBM DATE: 06Sep65/ ORIG REF: 014/ OTH REF: 004

Card 2/2 vmb

L 39814-66 EWT(m)/EPF(n)-2 JD/WW/GD-2/JG

ACC NR: AP6011009 (N) SOURCE CODE: UR/0080/66/039/003/0513/0522

13

AUTHOR: Ukraintsev, Ye. V.; Kashcheyev, N. F. 8

ORG: none

TITLE: Extraction of thorium with diisoamyl methylphosphonate from nitric acid solutions 27 27

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 3, 1966, 513-522

TOPIC TAGS: thorium, metal extracting, partition coefficient

ABSTRACT: The extractive properties of diisoamyl methylphosphonate (DAMP) in the extraction of thorium from nitric acid solutions were studied. Since water and nitric acid are integral parts of these systems, their extraction with DAMP was also investigated. The diluents employed for the extracting agent were benzene, p-xylene, and CCl_4. DAMP solutions in xylene and benzene were found to be more effective extractants than tributyl phosphate. Extraction of HNO_3 with DAMP involves the formation of the complex $HNO_3 \cdot H_2O \cdot DAMP$ with $K = 0.41 \pm 0.03$. Extraction of H_2O involves formation of a complex of the composition $n \cdot H_2O \cdot DAMP$, where n depends on the DAMP

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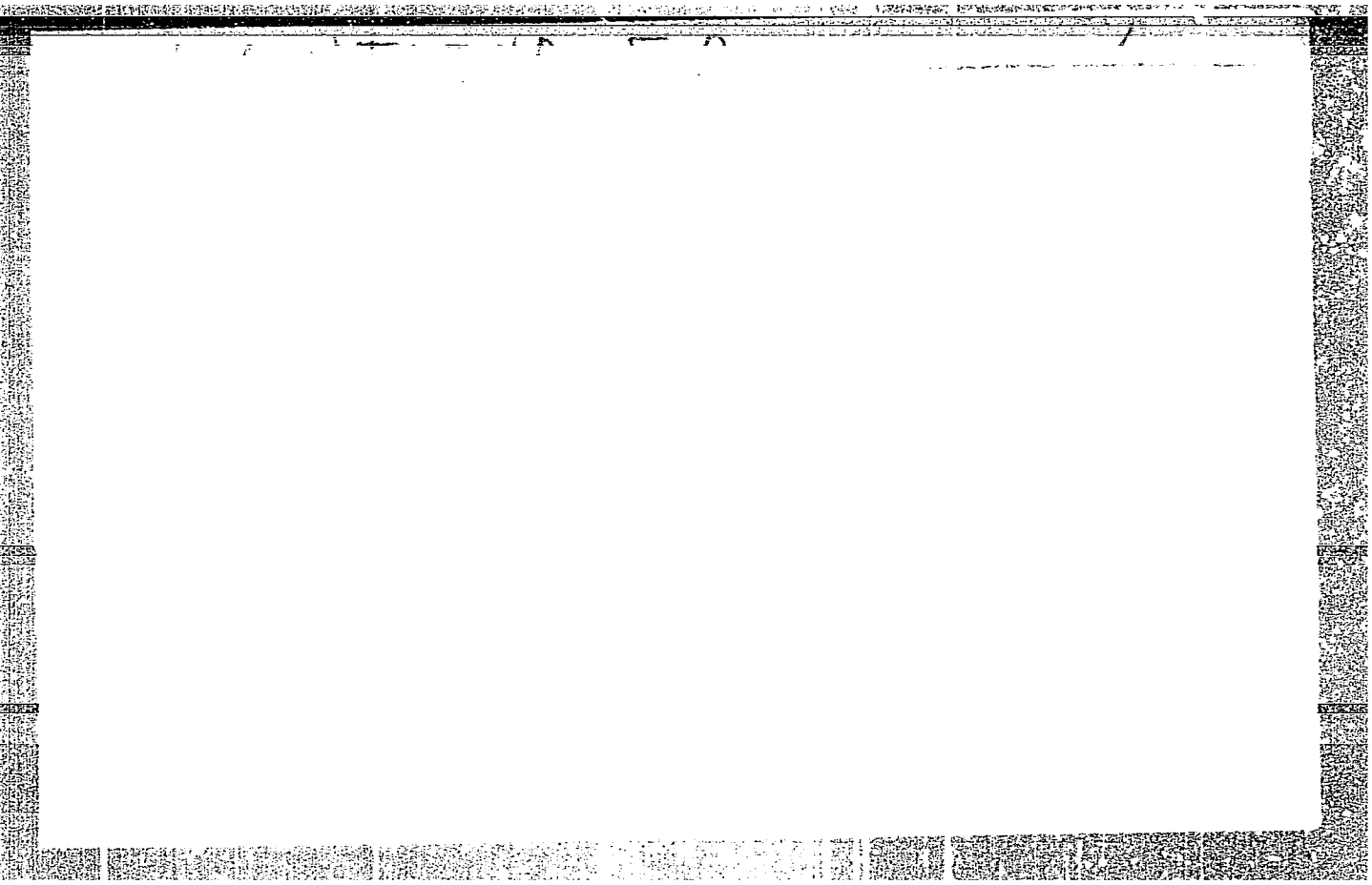
ACC NR: AP6011009

concentration in xylene and is equal to 3 for 100% DAMP and 1 for ≤30% DAMP. The partition coefficient for the extraction of thorium from nitric acid solutions increases sharply with decreasing HNO_3 concentration; this may be explained by the equation

$$Th(NO_3)_4 \cdot 2DAMP + DAMP \rightleftarrows Th(NO_3)_4 \cdot 3DAMP.$$

A comparative evaluation of the number of theoretical plates required for a 99% extraction of thorium with TBP and DAMP shows that use of the latter leads to a decrease in the size of the extraction apparatus. Water and weak ammonia solutions can be used for the reextraction of thorium from a 0.8 M solution of DAMP in xylene; the number of theoretical plates then varies from 1.2 to 3. Orig. art. has: 15 figures and 2 tables.

SUB CODE: 11,07/ SUBM DATE: 15May64/ ORIG REF: 007/ OTH REF: 003



APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001857910014-5"

UKRAINTSEVA, E.A.

Reaction of sodium phosphates with concentrated hydrogen peroxide. Izv. SO AN SSSR no.3 Ser. khim. nauk no.1:14-24 '63. (MIRA 16:8)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk, i Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR, Moskva.

(Sodium phosphates) (Hydrogen peroxide)

RUCHKIN, Ye.D.; UKRAINTSEVA, E.A.

Refraction of crystallizing hydrogen peroxide. Zhur.strukt.khim. 4 no.6:923-924 N-D '63. (MIRA 17:4)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.

UKRAINTSEVA, Ye.F.

Hemodynamic changes in women with heart defects during pregnancy, during labor, and after labor. Sov. med. 24 no.4:70-76 Ap '60. (MIRA 13:8)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. I.T. Mil'chenko) i fakul'tetskoy terapevticheskoy kliniki (zav. - prof. N.Ye.Kavetskiy) Kuybyshevskogo meditsinskogo instituta (dir. - kandidat meditsinskikh nauk D.A. Voronov).

(PREGNANCY) (LABOR (OBSTETRICS))
(HEART—DISEASES) (BLOOD (CIRCUIATION))

UKRAINTSEVA, Ye.F.

Electrocardiographic changes in women with heart defects during pregnancy, labor, and puerperium. Klin.med. 38 no.1:98-103 Ja '60. (MIRA 13:10)
(RHEUMATIC HEART DISEASE) (PREGNANCY, COMPLICATIONS OF)
(ELECTROCARDIOGRAPHY)

RYABOV, N.A., vrach; VARIN, I.Ye., vrach; ARKHANGEL'SKIY, V.N., prof.; LUBOTSKAYA-ROSSEL'S, Ye.M., vrach; BELETSKIY, V.G., dotsent (Smolensk); UKRAN, M.L., dotsent; USTINOV, S.D., starshiy prepodavatel' gimnastiki

Health hints. Zdarov'e 9 no.2:30-31 F '63. (MIRA 16:3)
(HYGIENE)

UKRAYINSKAYA, N. I.

Androgens - Therapeutic Use

Results of application of methyl-testosterone in certain vascular diseases. Klin. med. 30 No. 2, Feb. 1952.

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

UKHANSKAYA, N. I.

Heart - diseases

Result of application of methyl-testosterone in certain vascular diseases. Klin. med. 30 No. 2, 1952.

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

UKRAYNSKAYA, N. I.

Blood - Circulation, Disorders of

Result of application of methyl-testosterone in certain vascular diseases. Klin. med. 30, No. 2, Feb. 1952.

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

UKRAYINSKAYA, M.I.

Result of application of methyl-testosterone in certain vascular diseases. Klin. med., Moskva 30 no.2:75-76 Feb 1952. (CLML 22:1)

1. Of the Central Polyclinic (Head Physician -- V. N. Kharmushin; Head of Neurological Division -- Candidate Medical Sciences O. N. Masunina), Ministry of Public Health USSR, Moscow.

UKRAYNSKIY, V. T.

Grasses

Field viability and vitality of perennial grass shoots in the steppe zone. Sov. agron. 11, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

UKRAYNTSEV, A. A.

Technology

Mortoristy radiofikatsii (Technicians of the establishment of radio facilities). Moskva, Sviaz'izdat, 1951. 24 p.

Monthly List of Russian Accessions. Library of Congress. November 1952. Unclassified.

1. GUDYNOVICH, V. S., UKRAYNTSEV, G. A.

2. USSR (600)

4. Founding

7. Preparing mold cores without use of straw. Lit. proiz. no. 9, 1952.

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

UKROPINA, Dusan

Coccygodynia. Srpski arh. celok. lek. 91 no.5:505-509 My '63.

1. Klinika za ortopedsku hirurgiju i traumatologiju Medicinskog fakulteta Univerziteta u Beogradu Upravnik: prof. dr Svetislav Stojanovic.

(COCCYX) (BACKACHE)

S

STOJANOVIC, Svetislav; MARENIC, Slavija; UKROPINA, Dusan

Diseases in ballet dancers. Srpski arh. celok. lek. 91 no.10: 903-912 O'63.

1. Klinika za ortopedsku hirurgiju i traumatologiju Medicinskog fakulteta Univerziteta u Beogradu. Upravnik: prof.dr.Svetislav Stojanovic.

S

UKROPINA, R.

Ten years of geodetic survey service. II. p.1695. TEHNIKA. Beograd. Vol. 10, no. 12, 1955.

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

SOV/136-59-9-12/25

AUTHORS: Tselik, I.N. and Ukshe, N.S.

TITLE: Chlorination of a Titanium-Containing Slag

PERIODICAL: Tsvetnyye metally, 1959, Nr 9, pp 49-53 (USSR)

ABSTRACT: Investigations of titanium-containing materials is important. One of these is the slag obtained by melting an ilmenite concentrate with a determined quantity of coke. This contains 70 to 80% TiO_2. Normally a chlorine-air mixture, obtained from the electrolysis of $MgCl_2.NaCl_2$ mixtures, is used for chlorination. The slags were first ground, made up in briquettes, dried and heated at 800°C for 8 hours. Chlorination was carried out for 7 hours. Table 2 shows the effect of temperature on chlorination. 700°C is the optimum temperature. Further increases in temperature cause films of calcium and magnesium chlorides, and aluminium and silicon oxides which prevent contact of the particles with chlorine. Table 3 shows the influence of carbon content in the briquettes on chlorination. There is an increase of 5% with an increase of carbon content from 15 to 20%. Further increases in carbon content are not recommended. The anode chlorine was compared with concentrated chlorine. Table 4 shows a

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Chlorination of a Titanium-Containing Slag

comparison of the degree of chlorination and Table 5 of the rate of chlorination. Concentrated chlorine is better in both cases. Table 6 shows analyses of the commercial $TiCl_4$ produced from concentrated and anode chlorine. There is no difference in impurities. There are 2 figures and 6 tables.

ASSOCIATION:Bereznikovskiy Filial VAMI (Berezniki Branch VAMI)

NOVAKOVSKIY, V.M.; UKSHE, N.S.

Effect of chromium anhydride on steel corrosion in fused sodium bisulfate. [Trudy] UNIKHIM no.9:59-70 '61. (MIRA 15:12)
(Steel—Corrosion)
(Chromium oxide)

REZNIKOV, I.L.; BEZUKLADNIKOV, A.B.; UKSHE, N.S.; GLADYSHEV, A.F.; ZEZYANOV, S.P.; KURMAYEV, R.Kh.

Formation of phosgene during the chlorination of titanium slag in electric shaft furnaces and chlorinators. Titan i ego splavy no.9: 140-146 '63. (MIRA 16:9)

(Titanium—Metallurgy) (Chlorination)
(Phosgene)

ACC NR: AP6019018 (N) SOURCE CODE: UR/0032/66/032/001/0024/0025

AUTHOR: Lazarev, A. I.; Lazareva, V. I.; Uksho, N. S.

ORG: Institute of New Chemical problems, AN SSSR (Institut novykh khimicheskikh problem Akademii nauk SSSR)

TITLE: Determination of titanium in titanium nitride by photometric titration in a photometric colorimeter

SOURCE: Zavodskaya laboratoriya, v. 32, no. 1, 1966, 24-25

TOPIC TAGS: titanium, titanium compound, photometric analysis, colorimetric analysis, NITRIDE

ABSTRACT: Photocolorimetric analysis is carried out in a FEK-type photoelectric colorimeter by using two methods. The first method requires special devices: a cell-[illegible] lolepipida wooden cell holder, and a mixer. The second method is less convenient but does not require any special arrangement. Titrant is added into a flask containing a titrated solution, the cell is filled with a colored solution, the absorbance is measured with respect to water, the solution is again poured from the cell into the flask, etc. Solutions having an initial absorbance of <1 (better~0.5) should be used with a noticeably high absorption of light and without photocurrent intensification. For making the analysis, an 0.3 g sample of Ti nitride is placed into a 100 ml flask, 20 ml of H_2SO_4 solution (1:1) and 2 g of Na nitrate are added, and the mixture is heated. If

Card 1/2

ZENCHENKO, Aleksey Fedorovich [Zenchanka, A.]; UKSUSOV, D. [Uksusau, D.], red.; SLAVYANIN, I., tekhn.red.

[Let's show you Snov', a new collective farm village] Vos' iano, novae kalhasnae sialo Snou. Minsk, Dziarzh.vyd-va BSSR, 1959. 31 p. (MIRA 13:4)

(Collective farms)

KLIMOV, Arkadiy Frolovich [Klimau, A.F.]; UKSUSOV, D. [Uksusau, D.], red.; SLAVYANIN, I., tekhn. red.

[Words anddeeds] Slova i spravy. Minsk, Dziarzh. vyd-va BSSR. Red. masava-palit. lit-ry, 1960. 35 p. (MIRA 14:10)

1. Sekretar' Sennenskogo rayonnogo komiteta Kommunisticheskoy partii Belorussii (for Klimov).
(Senno District--Seine--Feeding and feeds)

DAYNEKO, Filipp Petrovich [Daineka, P.P.]; UKSUSOV, D. [Uksusau, D.], red.; SLAVYANIN, I., tekhn.red.

[Our most important potential] Nash halouny reserv. Minsk, Dziarzh.vyd-va BSSR, Red.massava-palit.lit-ry, 1960. 40 p. (MIRA 14:3)

1. Sekretar' Mostovskogo rayonnogo komiteta Kommunisticheskoy partii Belorussii (for Dayneko).
(Mosty District--Agricultural administration)

DORKIN, Vasiliy Grigor'yevich; [Dorkin, V.R.]; UKSUSOV, D. [Uksusau, D.], red.; SLAVYANIN, I., tekhn.red.

[Selecting and training collective-farm specialists] Padbor i vykhavanne kalhasnykh kadrau. Minsk, Dziarzh.vyd-va BSSR, Red.masava-palit.lit-ry, 1960. 52 p.

(MIRA 14:3)

(Collective farms) (Agricultural education)

LAGUNOVSKIY, Matvey Ignat'yevich;UKSUSOV, D., red.; YERMOLENKO, V., tekhn. red.

[Party organization and the mass-introduction of technological innovations]Partorganizatsiia i massovoe tekhnicheskoe tvorchestvo. Minsk, Gos.izd-vo BSSR, 1962. 44 p. (MIRA 15:12)

1. Sekretar' partiynogo komiteta Minskogo motovelozavoda (for Lagunovskiy).
(Minsk--Motorcycle industry) (Minsk--Bicycles and tricycles)
(Communist Party of the Soviet Union--Party work)

KULIK, P.A.; OKSUSOV, V.A.

Automatic machine for cutting blanks from crude rubber sections obtained on worm presses. Kauch.i rez. 21 no.12:46-47 D '62. (MIRA 16:1)

1. Sverdlovskiy zavod rezinovykh tekhnicheskikh izdeliy.
(Rubber industry—Equipment and supplies)

UKSVÄRAV, R.; TOOMASPOEG, J., otv. red.

[Production cycle and methods for determining its duration in a machinery plant; synopsis of a lecture] Tootmistsükkel ja selle kestuse kindlaksmääramise meetodid masinaehitusettevõttes; loengukonspekt. Tallinn, Tallinna Polutehniline Instituut, 1963. 35 p. [In Estonian]
(MIRA 17:9)

GLINYANYY, Valeriy Georgiyevich; UKTAM; KOCHEROV, I.V., red.; SALAKHUTDINOVA, A., tekhn. red.

[For high labor productivity; from the experience of the "Savai" State Farm, Andizhan Province] Za vysokuiu proizvoditel'nost' truda; iz opyta raboty soykhoza "Savai" Andizhanskoi oblasti. Tashkent, Gos.izd-vo UzSSR, 1961. 40 p. (MIRA 15:1)
(Andizhan Province—Agriculture—Labor productivity)

UKUBAYEV, A.U.

Success depends on specialists. Zemledelie 7 no.11:27-30 N '59
(MIRA 13:3)

1. Sekretar' Barankul'skogo raykoma kommunisticheskoy partii Kazakhstana.

(Akmolinsk Province--Reclamation of land)

KOYRANSKIY, B.B.; UKVOL'BERG, L.Ye.

Maintaining proper atmospheric conditions in industrial buildings. Gig.i san. no.8:30-39 Ag '53. (MLRA 6:9)

1. Leningradskiy institut gigiyeny truda i professional'nykh zabolevaniy. (Industrial hygiene)

UKVOL'BERG, L. Ya.

137-58-3-6309

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 267 (USSR)

AUTHORS: Koyranskiy, B.B., Ukvol'berg, L.Ya., Kuksinskaya, T.V.

TITLE: On the Acclimatization to High Air Temperatures (Ob akklimatizatsii k vysokim temperaturam vozdukha)

PERIODICAL: Tr. Yubileyn. nauchn. sessii, posvyashch. 30-letney deyat-sti Gos. n.-i. in-ta gigiyeny truda i profzabolevaniy. Leningrad, 1957, pp 59-66

ABSTRACT: A study of changes occurring in thermoregulatory mechanisms of the human system after prolonged and repeated exposure to high temperatures of fairly still air (0.1-0.2 m/sec) and at relatively small humidity (15-20 percent). An analysis of gas-exchange data revealed that the reaction to high temperature differed from one individual to another; however, certain regular patterns were established. In one type of reaction no changes in gas exchange were observed during a 2-hour exposure to a temperature of 40°C, whereas in another instance a sharp reduction in oxygen consumption was noted. On the strength of the data, indicating that no increases in the rate of gas exchange were observed in the individuals investigated, the authors conclude that the human system is capable of adapting itself to prolonged exposure to high temperatures. Ye.L.

Card 1/1

KOYRANSKIY, B.B., prof.; UKVOL'BERG, L.Ya., kand.med.nauk; DMITRIYEV, M.V., mladshiy nauchnyy sotrudnik

Influence of air ionization on mental efficiency. Gig. i san. 26 no.7:33-39 Jl '61. (MIRA 15:6)

1. Iz Leningradskogo instituta gigiyeny truda i professional'nykh zabolevaniy.
(AIR, IONIZED--PHYSIOLOGICAL EFFECT)
(REASONING (PSYCHOLOGY))

KOYRANSKIY, B.B., prof.; UKVOL'BERG, L.Ya., kand.med.nauk; DMITRIYEV, M.V., mladshiy nauchnyy sotrudnik; KOLODINA, N.S., mladshiy nauchnyy sotrudnik

Influence of air ionization on work efficiency. Gig. i san. 26 no.7:29-33 Jl '61. (MIRA 15:6)

1. Iz Leningradskogo instituta gigiyeny truda i professional'nykh zabolevaniy.

(AIR, IONIZED—PHYSIOLOGICAL EFFECT)
(WORK)

L 53898-65

ACCESSION NR: AP5017368

TITLE: Effect of weak cold stimuli on the body's heat-regulating mechanism

SOURCE: [illegible] i meditsina, no. 10, 1964, 21-27

TOPIC TAGS: experiment animal, medical experiment, human physiology, nervous system, heat biologic effect

L 53[illegible]-65
ACCESSION NR: AP5013[illegible]

cold.

The observed effect is explained by [illegible] the centra[illegible]

Orig. art. has 10 tables.

ASSOCIATION: Leningradskiy nauchno-issledovatel'skiy [illegible] (Leningrad Scientific Research Institute [illegible] Occupational Diseases)

SUBMITTED: 08Jul63 ENCL: 00 [illegible]

NO REF SOV: 010 OTHER: 000 JPRS

Card 2/2

L 40163-66

ACC NR: AP6024418 SOURCE CODE: UR/0240/66/000/007/0023/0029

AUTHOR: Koyranskiy, B. B. (Professor); Ukvol'berg, L. Ya. (Candidate of medical sciences); Dmitriyev, M. V.

ORG: Leningrad Scientific Research Institute of Industrial Hygiene and Occupational Diseases (Leningradskiy nauchno-issledovatel'skiy institut gigiyeny truda i profzabolevaniy)

TITLE: Effect of weak cold stimuli (subnormal temperatures) on human thermoregulation

SOURCE: Gigiyena i sanitariya, no. 7, 1966, 23-29

TOPIC TAGS: hypothermia, hypothermia biologic effect, human physiology, human thermoregulation, BODY TEMPERATURE, TEMPERATURE ADAPTATION, PHYSIOLOGIC PARAMETER, BIOLOGIC ECOLOGY

ABSTRACT: Three series of experiments were conducted in a meteorological chamber at 0C, 5C, and 8C with 50—60% humidity and 0.1—0.2 m/sec air current. The purpose of these tests was to determine the effect of cold on human thermoregulation. Six or seven healthy subjects aged 20—26 were used in each series. They were dressed in ordinary clothing and remained in a resting position in the chamber until their removal and observation for an hour at 20—23C. Every half hour, the subjects were examined for: 1) cold receptor mobility; 2) cold sensitivity (8C); 3) oxygen consumption; 4) skin temperature in different areas; 5) pulse rate; 6) arterial pressure; and 7) CNS reaction. Each test series lasted 50—60 days and a total of 650 observations were

Card 1/2 UDC: 612.55:612.59

L 40163-66

ACC NR: AP6024418

made. It was found that the temperatures used caused a weak thermoregulatory reaction. This inadequacy of reaction was judged to be the main cause of predominant overcooling in this experiment. Orig. art. has: 5 tables. [CD]

SUB CODE: 06/ SUBM DATE: 29May65/ ORIG REF: 006/ ATD PRESS: 5049

Card 2/2 MLP

MURANI, Laslo [Muranyi, Laszlo]; BODA, Domokosh [Boda, Domokos]; KOVACH, Ferents [Kovacs, Ferenc]; UL, Karoy [Ul, Karoly]

Use of controlled respiration in combination with curare for treating acute convulsive states in childhood. Zhur.nevr.i psikh. 62 '62. (MIRA 15:9)

1. Budapeshtskaya gorodskaya infektsionnaya bol'nitsa "Laslo". (CURARE) (ARTIFICIAL RESPIRATION) (CONVULSIONS)

UL, V.

Growth of capacity in petroleum refining. Neftepер. i neftekhim. no.8:44-45 '64. (MIRA 17:10)

UL', Ye.F.

Results of the survey of the studies of temperature and seasonal soil freezing in the U.S.S.R. Trudy Inst. merzl. AN SSSR 17:94-102 '61. (MIRA 15:2)
(Cryopedology)

ULADZIMIRAVA, M.

Peace, friendship, and love. Rab. i sial. 33 no.8:12-14 Ag '57.
(Moscow--Youth--Congresses) (MLRA 10:8)

ULADZIMIRAVA, M.

Beloved sister of our Il'ich. Rab. i sial. 39 no.2:10 F '63.
(MIRA 16:4)

(Ul'ianova, Mariia Il'ichna, 1878-1937)

ULAGA, P.

Education of cadres in the Jesenice Ironworks. p. 293. (NOVA PROIZVODNJA, Vol. 5, no. 3/4, Sept. 1954. Ljubljana, Yugoslavia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, Apr 1955, Uncl.

ULAKHOVICH, A.; SUZDAL'TSEV, I.

Telecommunication

Experience of working with the population. Sov. sviaz. 3, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

ULAKHOVICH, A.P.

Th: might of socialist competitions. Vest. sviazi 25 no.4: 18-19 Ap '65. (MIRA 18:6)

1. Nachal'nik Kazanskogo ekspluatatsionno-tekhnicheskogo uzla svyazi.

STEIN, P.R.; ULAM, S.M.

Nonlinear transformation studies on electronic computers.
Rozprawy matemat 39:1-65 '64.

ZOLOTUKHIN, K.S.; ULANOV, I.M.

Thermocouples for measuring temperatures of the hot blast and of the crowns of hot-blast stoves. Stal' 25 no.8:690-691 Ag '65. (MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod.

YAGUDAYEV, M.D., red.; GORBACHEV, P.P., red.; AKHMEDOV, D.B., red.; ULAN, F.V., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Research on the utilization of solar energy] Issledovaniia po ispol'zovaniiu solnechnoi energii. Tashkent, Izd-vo AN Uzb.SSR. No.1. 1963. 107 p. (MIRA 16:9)
(Solar energy)

TALANIN, Yu.N., otv. red.; BAKLITSKAYA, A.V., red.; ULAN, V.F., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Radiation effects in solids] Radiatsionnye effekty v tverdykh telakh. Tashkent, Izd-vo Akad. nauk UzSSR, 1963. 164 p. (MIRA 16:7)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut yadernoy fiziki.

(Solids, Effect of radiation on)

ULANOV, A.

Ulanov, A. "Seismic Observations in the Far East." Nauchnye Novosti Dal'niago Vostoka, Vladivostok, No. 4/5, 1929, pp. 19-22.

ULANOV, A.

Ulanov, A. "A Contribution to Materials on the Seismology of the Far East." Izvestiia Dal'nevostochnogo Geofizicheskogo Instituta, Vladivostok, No. 1, 1931, pp. 100-137.

ABRAMOV, V.; ULANOV, A.

Financing the operational expenses of water-supply organizations. Fin. i kred. SSSR no.6:55-59 Je '53. (MLRA 6:6)
(Agricultural credit)

ULANOV, A.

ABRAMOV, V.; ULANOV, A.

Shortcomings in financing the administrative organs of state irrigation systems. Fin.SSSR 16 no.9:69-71 S'55. (MIRA 8:12)
(Irrigation--Finance)

ULANOV, A.

SOBOLEVSKIY, L.; ULANOV, A.

Business accounting in composite crews. Nauka i pered. op. v sel'-khoz. 7 no.5:17-18 My '57. (MIRA 10:6)

1. Nauchnyye sotrudniki Severo-Kavkazskogo filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva.
(Collective farms--Accounting)

ULANOV, A.

More on the transfer of irrigation systems to a business accounting basis. Fin. SSSR 23 no.2:49-51 F '62. (MIRA 15:2)
(Kuban--Irrigation farming--Finance)

ULANOV, A.

Supply irrigation systems with norms for working capital. Fin. SSSR 37 no.3:43-46 Mr '63. (MIRA 16:4)
(Uzbekistan--Water resources development--Finance)

GOLUBENKO, V.; KALININ, N., pensioner (Moldavskaya SSR); ULANOV, B., traktorist (Stavropol'skiy kray)

Readers relate, advise and criticize. Sov. profsoiuzy 19 no.6: 16-17 Mr '63. (MIRA 16:3)

1. Inspektor obshchestvennogo torgovogo otdela pri Staro-Oskol'skom gorodskom sovete, Belgorodskaya obl. (for Golubenko).
(Labor and laboring classes)

ACCESSION NR: AP

... technical sciences, Docent); Ulanov, B.

TITLE: Residual stresses during end milling of heat resistant and titanium alloys

SOURCE: Vestnik mashinostroyeniya, ...

... cutter made of VK8M (R9K10 for alloy EI766) ... milling with an end mill (D = 120 mm) having ... and in steel Specimens (6 x 20 x 70 mm) were machined over a range of cutting conditions (along the axis of the specimen to obtain the axial residual stresses ... were experimentally investigated, perpendicular to the axis to obtain tangential residual stresses, and stresses as a function of depth ... ment of the bending of the longitudinal ... continuous etching ... The residual stresses were obtained ...

... (EI766) ... 160 (VT5) m/min ... range of cutting conditions ... gauge. Residual ...

Card 1/2

L 23028-65

ACCESSION NR: AP4049499

(VT6) mm/tooth; depth of cut t = 1.0 (EI766) -- 3.5 (OT4) mm; tool wear h_3 = 0.05 (EI766) -- 0.5 (VT6) mm, and cutting tool angle γ = 7° (OT4) -- 20°. It was found that: alloys VT6 and OT4 had essentially compressive residual stresses, while more plastic materials (Kh18N10T) had tensile residual stresses, which were stresses were 1.5-2.5 times smaller [illegible] residual stresses; [illegible] corresponding [illegible]

[illegible]

SUBMITTED: 00

OTHER: 000

Card 2/2

KRUGLYAKOVA, K.Ye.; ULANOV, B.P.; ZYBINA, D.L.; EMANUEL', N.M.

Kinetic characteristics of the effect of chemical mutagens (ethyl-enimine derivatives) on DNA. Dokl. AN SSSR 161 no.3:718-720 Mr '65. (MIRA 18:3)

1. Chlen-korrespondent AN SSSR (for Emanuel').

ZHIL'TSOVA, V.M.; KRUGLYAKOVA, K.Ye.; ULANOV, B.P.; GINDIN, L.G.

Kinetics of DNA denaturation following ultraviolet irradiation. Dokl. AN SSSR 164 no.1:198-200 S '65. (MIRA 18:9)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut i Institut khimicheskoy fiziki AN SSSR. Submitted March 25, 1965.

ACC NR: AP6027739 SOURCE CODE: UR/0020/66/169/004/0965/0966

AUTHOR: Ulanov, B. P.; Il'yashenko, B. N.; Tashpulatov, R. Yu.; Engel'gardt, V. A. (Academician)

ORG: Institute of Physical Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR); Institute of Epidemiology and Microbiology im. N. F. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: Electron micrographic studies of phage 1F7 DNA

SOURCE: AN SSSR. Doklady, v. 169, no. 4, 1966, 965-966

TOPIC TAGS: electron microscope, bacteriophage, DNA, molecular structure

ABSTRACT:

Sedimentation analysis and studies of fragmented phage DNA reveal the DNA of phage 1F7 to be a closed circular polynucleic chain with a molecular weight between 1.6—1.7 x 10^6 units, with single-stranded DNA. The authors are convinced that circular stranded DNA is not an artifact and present preliminary data to support their view. [WA-50; CBE No. 11]

SUB CODE: 06/ SUBM DATE: 16Nov65/ ORIG REF: 002/ OTH REF: 007

Card 1/1 UDC: 576.858.579

ULANOV, F. I.

USSR/General Problems - Problems of Teaching A-3

Abst Journal : Referat Zhur - Fizika, No 12, 1956, 33614

Author : Ulanov, F. I.

Institution : None

Title : Purpose and Construction of Ballistic Pistol

Original Periodical : Sb.: V Pomoshch' Uchitelyu, No 11, Nal'chik, Kabardinsk Book Publishing House, 1956, 96-108

Abstract : Description of an instrument intended for the demonstration of the movement of bodies thrown at an angle with the horizontal and horizontally.

Card 1/1

ULANOV, F. S.

ULANOV, F. S. -- "The Agricultural Engineering of Foxtail Millet in the Region of Irriga ted Agriculture of Alma-Ata Oblast." Min Higher Education USSR. Kazakh State Agricultural Institute. Alma-Ata, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences.)

So; Knizhaya Letopis' No 3, 1956

ULANOV, G.

Repairing anvil blocks of drop hammers at the Kharkov Tractor Plant. Mashinostroitel' no.12:14 D '63.
(MIRA 17:1)

...ov, G. M.

PA 13/49T31

USSR/Electronics
Regulators, Electronic
Regulators, Voltage

Jul/Aug 48

"Proceedings in the Institute of Automatics and Telemechanics, Academy of Sciences USSR," G.M. Ulanov, 1½ pp

"Avtomatika i Telemekh" Vol IX, No 4

Summarizes first year of seminar on theory of automatic regulation. Mentions titles of some papers, giving names of authors. Seminar is responsible for 40% of the world total of articles on the theory of automatic regulation.

[redacted]

13/49T31

ULANOV, G. M.

USSR/Electronics
Regulators, Electronic
Circuits, Electronic
May/Jun 1948

"Maximum Deviation of the Regulated Quantity in a Transition Process," G. M. Ulanov, Inst of Automation and Telemech, Acad Sci USSR, 8 pp

"Avtomat i Telemekhan" Vol IX, No 3

Solves problem of evaluating maximum deviation of regulated quantity in linear systems of automatic regulation by means of du Hamel's integral. Shows that maximum variation is very simply determined by values of the limits of transition process, which arises in the system when it is disturbed by a single force applied suddenly. Quotes examples of calculation of upper limit of maximum deviation of calculated quantity in some dynamic systems, and in particular, the concrete system of automatic control of pressure charging in aero-engine. Submitted 30 Sep 1947.

76T16

Ulanov, G. M.

USSR/Electricity - Automatic Control Systems

Card : 1/1

Authors : Ulanov, G. M.

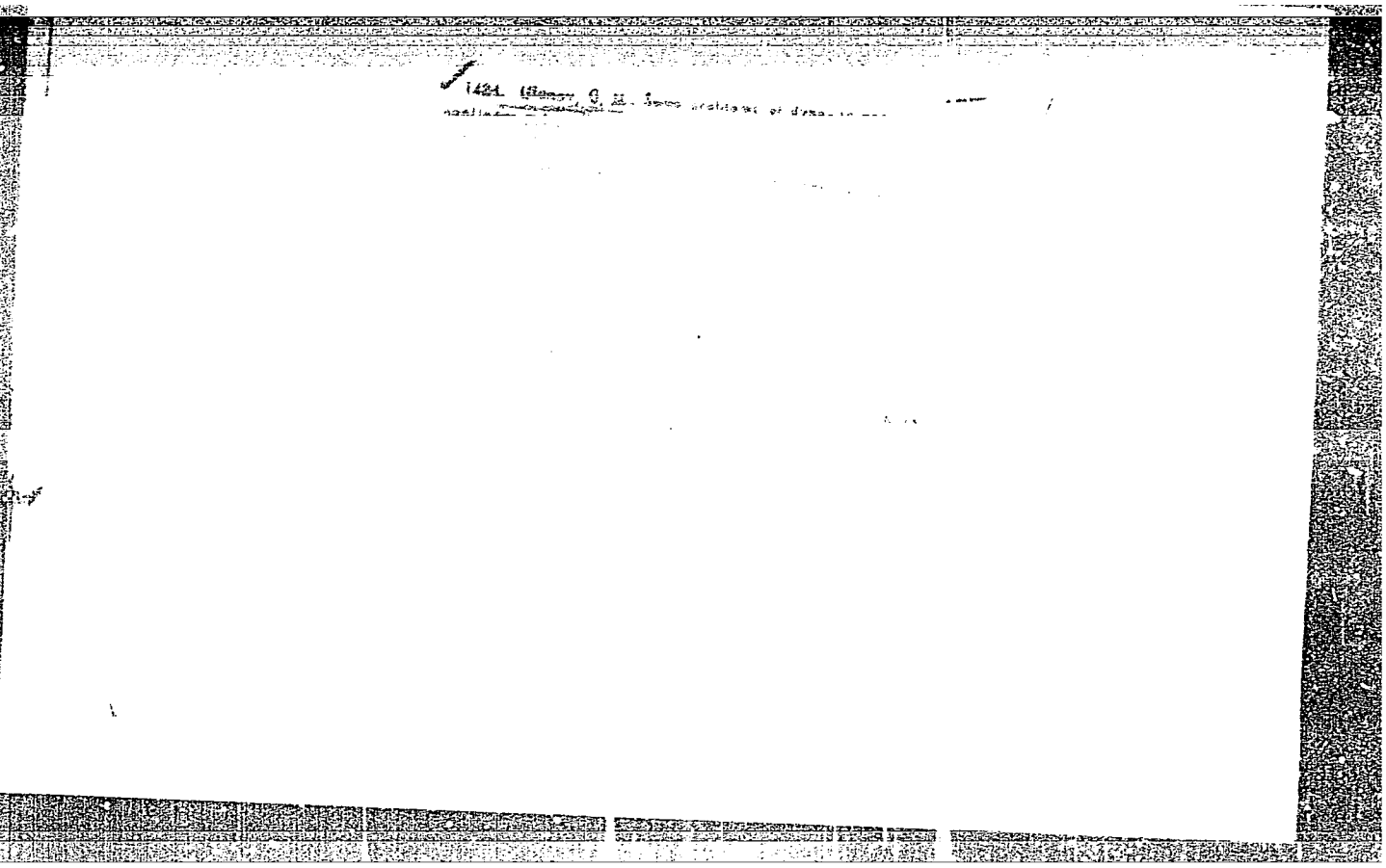
Title : Automatic-control system and servo-systems, operating on open and closed cycles and the invariance principle

Periodical : Dokl. AN SSSR, 96, Ed. 5, 979 - 981, June 1954

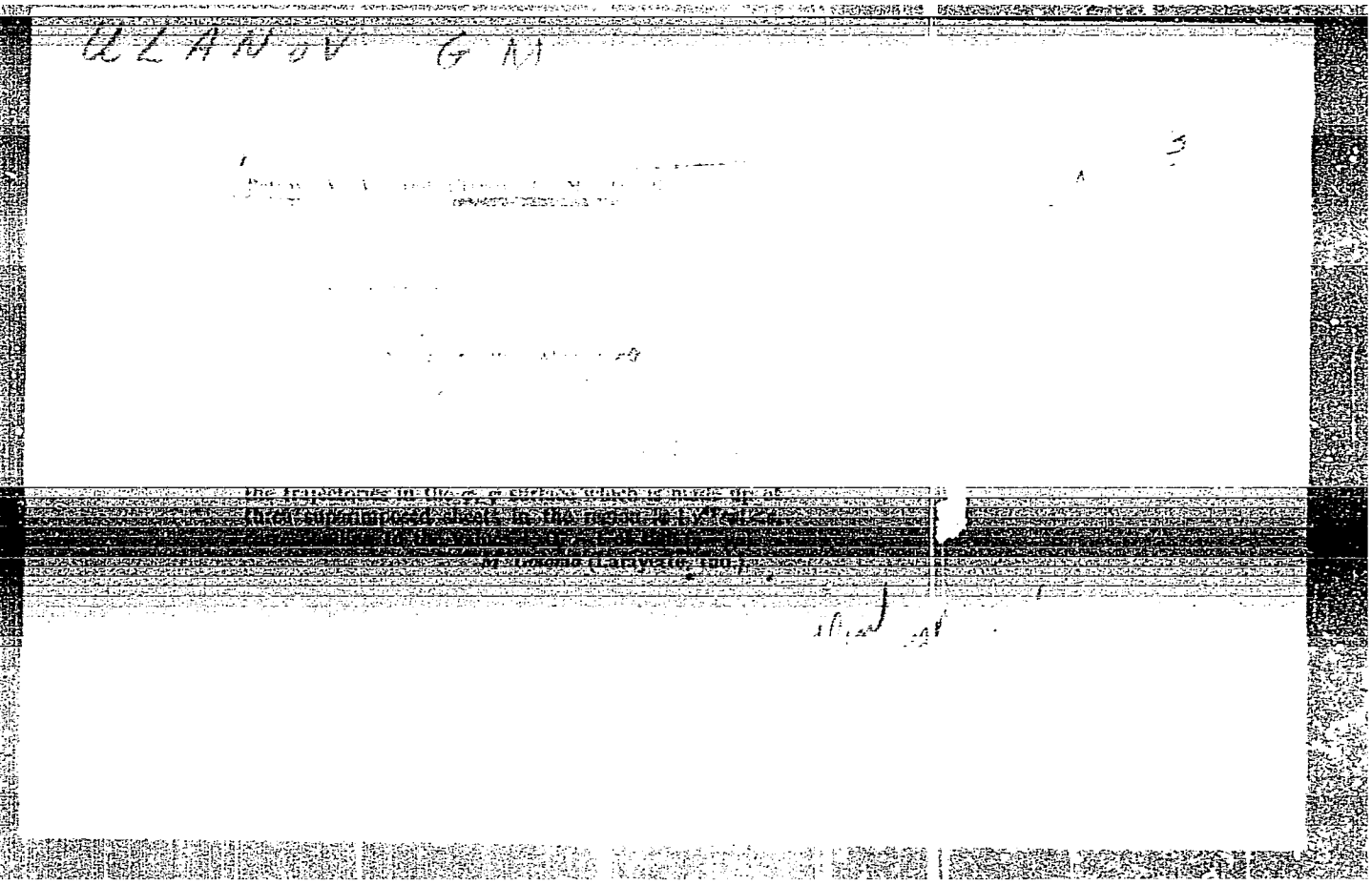
Abstract : After a brief analysis of the basic principles used in the design of various automatic-control and servo-systems, specifically the open and closed cycle system, the author discusses a method based on the invariance principle applied to the above system, in order to reduce to a minimum the dynamic error of the system's operation. The author demonstrates that the conditions, for designing a system operating at a highest degree of accuracy, are necessarily the same conditions which must be adhered to when applying the principle of invariance. A typical layout of the above-mentioned automatic control system is shown, and a mathematical formulation of the invariance principle, as applied to this layout, is offered. One diagram; 12 references, 4 of which are USSR references (1940-1953)

Institution : ....

Presented by : Academician, V. S. Kulebakin, March 13, 1954



Ulanov, G. M., "The Maximal Deviation of a Controlled Value in the Transition Process", Avtomatika i telemekhanika, Vol 9, No. 3, pp 168-175, 2 illustrations, bibliography, 6 titles.



ULANOV, G.M.

USSR/ Engineering - Servo-mechanisms

Card 1/1 Pub. 22 - 12/62

Authors : Ulanov, G. M.

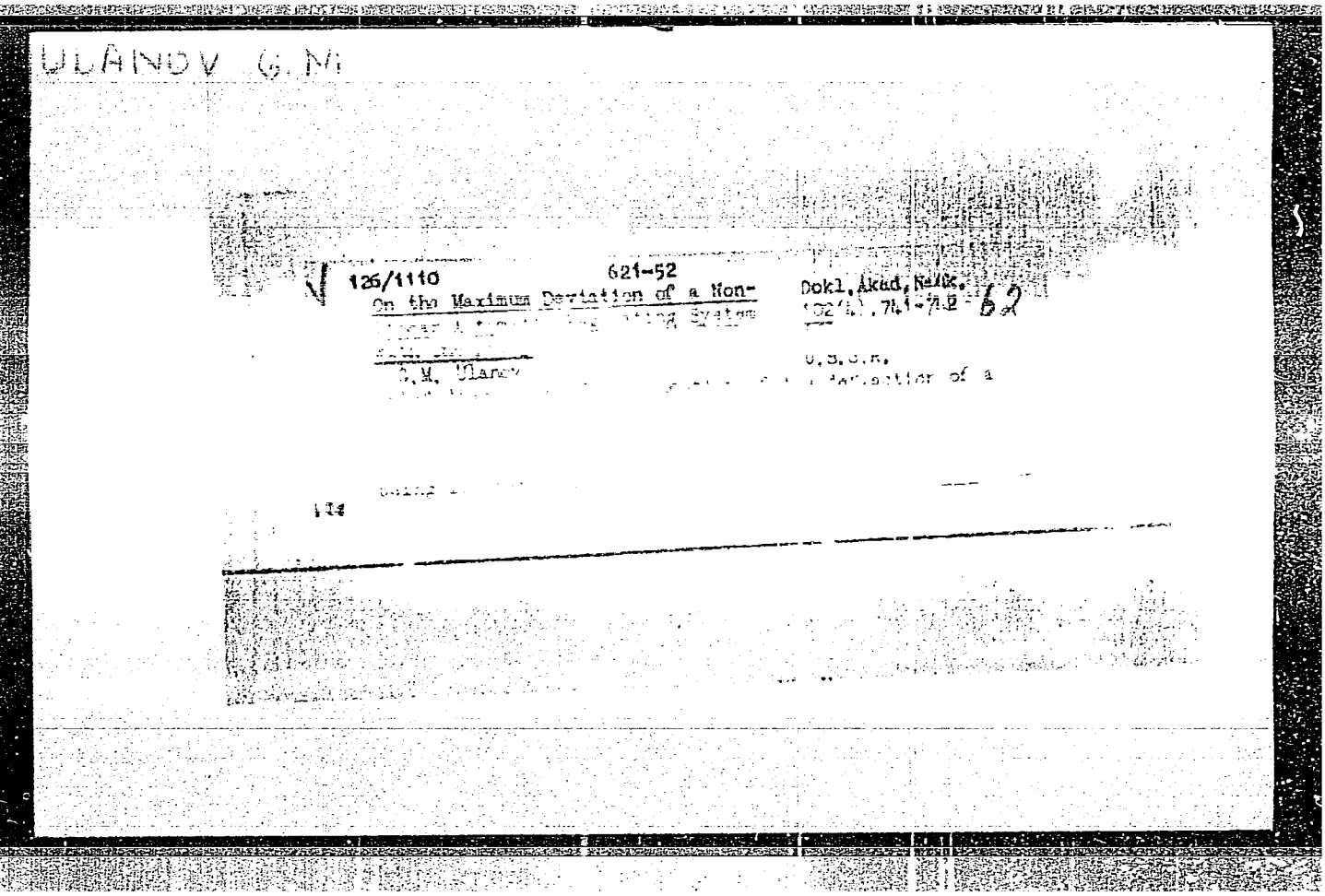
Title : On the theory of dynamic precision in the non-linear system of indirect regulation

Periodical : Dok. AN SSSR 102/3, 465 - 467, May 21, 1955

Abstract : Methods of determining dynamical precision, i. e., the maximum deviation, from theoretical figures, in a non-linear system of indirect regulation are discussed. In particular the application of the method of poly-phyllous phase plane to the problem is outlined. Eleven USSR references (1887-1955). Diagram.

Institution : .....

Presented by: Academician V. S. Kulebyakin, November 4, 1954



ULANOV G.M.

126/1110 621-52

On the Maximum Deviation of a Non-

Dokl. Akad. Nauk.

G.M. Ulanov

U.S.S.R.

SOV/124-57-9-9945

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 9, p 10 (USSR)

AUTHOR: Ulanov, G. M.

TITLE: On Some Applied Methods of Investigation of Linear Automatic-control Systems With Variable Parameters (O nekotorykh prikladnykh metodakh issledovaniya lineynykh sistem avtomaticheskogo regulirovaniya s peremennymi parametrami)

PERIODICAL: Sb. statey po avtomatike i elektrotekhn. Moscow, AN SSSR, 1956, pp 42-62

ABSTRACT: Some examples of automatic-control systems are presented. Their transient processes are described by systems of linear equations with variable coefficients. A stability condition is obtained for the obvious solution of the equation

$$\sum_{i=0}^{n} (a_i + b_i t)\frac{d^i x}{dt^i} = 0 \qquad (6)$$

consisting in $\mathrm{Re}\, S_i < 0 \quad (i=1,\ldots,n)$ where $S_1,\ldots,S_n$ are the roots of the equation

$$b_n s^n + \ldots + b_1 s + b_0 = 0 \ .$$

Card 1/2

On Some Applied Methods of Investigation of Linear Automatic-control (cont.)

As an illustration of the possible application of Lyapunov's second method, the problem of the stability of the system

$$\frac{dx}{dt} = y, \quad \frac{dy}{dt} = - b(t)x + ay$$

is investigated by an approach which the author attributes to M. A. Ayzerman. Actually, the first results obtained by an application of Lyapunov's method are found in N. G. Chetayev's book "Ustoychivost' dvizheniya" (Stability of Motion) and in other works. References thereto do not appear in the paper. The possibility of applying the Laplace transform is demonstrated on the example of the equation

$$\frac{d^2\phi}{dt^2} + \frac{1}{t}\frac{d\phi}{dt} - k^2\phi = 0 \qquad (38)$$

Further on, the findings of V. V. Solodovnikov and Ye. I. Chernov are explained. These are based on an application of the convolution theorem. In conclusion the author shows the possibility of the determination of a transient process by means of an impulse function based on the Duhamel integral. The paper does not contain any new results.

B. S. Razumikhin

Card 2/2

PETROV, B.N.; PETROV, V.V., kandidat tekhnicheskikh nauk; ULANOV, G.M., kandidat tekhnicheskikh nauk.

Conference on the theory of automatic control. Vest.AN SSSR 26 no.8: 60-62 Ag '56. (MLRA 9:9)

1.Chlen-korrespondent AN SSSR (for Petrov, B.N.)
(Liblice, Czechoslovakia--Automatic control--Congresses)

SOV/124-58-5-4993

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 8 (USSR)

AUTHORS: Petrov, B.N., Ulanov, G.M.

TITLE: Aspects of the Theory of Combined Control (Voprosy teorii kombinirovannogo upravleniya)

PERIODICAL: Sessiya AN SSSR po nauchn. problemam avtomatiz. proizva. Nauchno-tekhn. problemy avtomatizirov. elektroprivoda. Moscow, AN SSSR, 1957, pp 191-209

ABSTRACT: What is meant by "combined control" is the blending in one system of the ordinary closed loop (displacement control) with an additional open loop (perturbation or guidance control). Combined control makes it possible to achieve invariance and at the same time eliminate the forced error component of automatic systems. Mathematical relationships are given for the problem of ε invariance in linear combined-control systems. A harmonic-balance method is used to investigate the effect of invariance in sinusoidally perturbed nonlinear systems. The effect of invariance in a relay servo system is investigated by the phase-plane method. Included is an example of investigation of the effect of invariance in a nonlinear automatic-control system by means of an electronic analog simulator. Ye.P. Popov

Card 1/1

1. Control systems--Theory

ULANOV, G.M.

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