GUDYNOVICH, V. S.

228T93

USSR/Metallurgy - Cast Iron, Technology May 52

"Antifriction Cast Iron From the Unalloyed Furnace Charge," V. S. Gudynovich, L. M. Cherkasov, Engineers, Dnepropetrovsk Metallurgical Inst

"Litey Proizvod" No 5, pp 21, 22

Describes procedure of obtaining antifriction cast iron in cupola furnace with addn of copper. Discusses possibility of substituting copper cast iron as antifriction metal for perlitic Cr-Ni cast iron, smelting of which requires addn of naturally alloyed cast irons or steel scrap sufficiently rich with Cr and Ni. Notes that, Cu has favorable effect on castability of cast iron.

228T93

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.

GUDKOVICH, V.S.

"Investigating the Effect of Casting Forms on the Quality of Steel Rolling Mills." Cand Tech Sci, Dnepropetrovsk Metallurgical Inst., Dnepropetrovsk, 1954. (RZhKhim, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

SOV/128-59-8-13/29

18(5)
AUTHOR: Gudynovich, V.S., Candidate of Technical Sciences

TITLE: All-Stamped Chaplets

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 8, p 27 (USSR)

ABSTRACT: The author shows in the two figures two all-stamped chaplets, stamped out from a steel strip. There are 2 diagrams.

Card 1/1

GUDYNSKAYA, TS. Ya.

Functional changes of the adrenal cortex in obliterating endarteritis. Khirurgiia 34 no.10:17-28 O '58 (MIRA 11:11)

1. Iz gospital'noy khirurgicheskoy kliniki (dir. deystvitel'nyy chlen AMN SSSR prof. B.V. Petrovskiy) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(ARTERIOSCLEROSIS OBLITERANS, pathol.
adrenal cortex changes (Rus))
(ADRENAL CORTEX, pathol.
in arteriosclerosis obliterans (Rus))

GUDYNSKAYA, TS. Ya.

Treatment of endarteritis obliterans with steroid hormones.
Vest. khir. 94 no.2:43-46 F '65. (MIRA 18:5)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. B.V. Petrovskiy) i kafedry obshchey khirurgii i travmatolotii (zav.- prof. A.N. Shabanov) sanitarno-gigiyenicheskogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

GUDYNSKIY, Ya. V., kand. med. nauk; MARSHAK, A. M., kand. med. nauk

Use of antibacterial preparations in urology. Urologiia no.3:65-70 '61. (MIRA 14:12)

1. Iz urologicheskoy kliniki (zav. - zasluzhennyy deyatel' nauki prof. A. P. Frumkin) TSentral'nogo instituta usovershenstvovaniya vrachey i iz Laboratorii po klinicheskoy aprobatsii novykh antibiotikov (zav. - deystvitel'nyy chlen AMN SSSR prof. I. G. Rufanov) Akademii meditsinskiy nauk SSSR.

(UROLOGY) (ANTIBIOTICS)

LYTKINA, V.S.; GUDYMSKIY, Ya.V.

Use of the uroflograph for studying the act of urination.
Nov. med. tekh. no.2:90-94 '64.
(MIRA 18:11)

GUDYRINA L. L.

S/137/62/000/001/219/237
A154/A101

AUTHORS: Nikitina, O. I., Gorevaya, A. Ye., Sklyar, M. G., Gudyrina, L. L., Invanova, N. K., Miroshnichenko, Z. N.

TITLE: On the ratio of the elements in the solid and vaporous phases upon spectral analysis of iron alloys in various gaseous media

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 5, abstract 1K32 ("Sb. tr. Ukr. n.-i. in-t metallov", 1961, no. 7, 301 - 321)

TEXT: An investigation was made into the effect of the oxidizing ability of a medium on the ratio of the elements of an alloy in a vaporous phase as compared with the solid phase by spectral analysis in a spark and an arc of the ternary Fe alloys: Fe-Cr-Mn, Fe-Cr-Al, Fe-Cr-Ni and Fe-Cr-W. It was found that the results of determination of the elements in a spark discharge scarcely depend on the oxidizing ability of the medium. In all gaseous media the graduation curves are common and rectilinear over the entire range of selected concentrations. Analysis of the alloys in a spark in an oxidizing medium revealed that the relative concentration of the elements in the vaporous phase does not differ from that in the solid phase of the alloy. The supply speed of the elements in

Card 1/2

On the ratio of the.... .

S/137/62/000/001/219/237
A154/A101

the discharge zone in spark analysis depends on the oxidizing ability of the medium, in the given gaseous medium; it is governed by the physicochemical properties of the solid alloy phases and does not depend on the volatility of their oxides. Upon analysis in an arc discharge in various gaseous media shifts of the graduation curves occur, which is explained by the role of the oxidizing processes under the effect of the spark discharge.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

S/185/62/007/005/007/013
D407/D301

AUTHORS: Nikitina, O.I., Hudyrina, L.L., Horyeva, A.E., and Ivanova, N.K.

TITLE: Effect of supplementary-electrode material on the composition of the vapor phase in the spectral analysis of ferrous metals

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 5, 1962, 523 - 528

TEXT: The composition of iron alloys in the vapor phase and the intensity of the analytic lines were studied as a function of the material of the supplementary electrode. The investigation had 2 objects: a) Determination of the composition of the vapor phase by the colorimetric method of analysis of condensates. b) Determination of line intensity by the method of linear absorption. The ternary alloys Fe-Cr-Ni and Fe-Cr-W were investigated, as well as commercial alloys. The supplementary electrode was made of rods of the same material as the investigated alloy, or of copper, carbon and aluminum. It was established that the material of the supplementary electrode

Card 1/3

Effect of supplementary-electrode ...

affects the rate of entry of the elements into the vapor phase and the discharge temperature, thereby affecting the absolute intensity of the spectral lines. The rate of entry increases if the supplementary electrodes are replaced in the following order: Carbon, copper, self-electrode. The curves Cr-line intensity versus concentration undergo a parallel shift on replacing the electrodes, whereas the corresponding curves for Ni and W are shifted at an angle. The rate of entry of the elements is related to the physical and chemical properties of the alloy and of the electrode. The temperature of the discharge cloud changes as follows (depending on the type of supplementary electrode): $T_{carbon} > T_{self} > T_{copper} > T_{alum.}$. The intensity of the spectral lines of Ni changes in a greater measure than that of Cr, if the electrodes are replaced. The ratio of the concentration of the alloying element to that of iron in the vapor phase, remains practically unchanged (as compared to the solid phase) if carbon and self-electrodes are used, and varies somewhat if copper electrodes are used. The graduation curves undergo a parallel shift if this ratio changes. In conclusion, In order to determine the concentration of elements in the investigated alloys, spark analysis

Card 2/3

with self-electrodes should be conducted, and analytic lines with low absorption at the source should be used. There are 4 figures and 2 Soviet-bloc references.

ASSOCIATION: Ukrayins'kyy naukovo-doslidnyy instytut metaliv (Ukrainian Scientific Research Institute of Metals) Kharkiv

SUBMITTED: January 4, 1962

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000617230004-8"

NIKITINA, O.I.; GOREVAYA, A.Ye.; GUDYRINA, L.I.

Spectrum analysis of ferrous metals on a DFS-10 quantometer with automatic recording. Sbor.trud. UNIIM no.11:405-408 '65. (MIRA 18:11)

MANZHULA, N.G.; SAVEL'YEV, I.P.; GUDYRIN, Yu.N.; SAMSONOV, G.N.

Testing the IK-52sh cutter-loader with the M-87 support. Ugol' 40 no.2:39-43 F '65. (MIRA 18:4)

1. Shakhtoupravleniye No.1 "Znamya kommunizma" tresta Krasnoluchugol' kombinata Donbassantratsit (for Manzhula). 2. Luganskiy sektor Gosudarstvennogo proyektno-konstruktorskogo i eksperimental'nogo instituta ugol'nogo mashinostroyeniya (for Savel'yev, Gudyrin). 3. Gosudarstvennyy proyektno-konstruktorskiy i eksperimental'nyy institut ugol'nogo mashinostroyeniya (for Samsonov).

MERKULOV, N.Ya.; SAVEL'YEV, I.P.; GUDYRIN, Yu.N.

Economic efficiency of narrow-cut coal mining. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 18 no.11:63-65 N '65. (MIRA 18:12)

GUDZ, A., inshener.

Improving sectional gate valves. Nast. ugl. 5 no.4:21-22 Ap '56. (MLRA 9:7)
(Coal-handling machinery)

BABICHEV, N.S., gornyy inzhener; GUDZ', A.G.

"Progressive methods of shaft sinking" by N.V. Shilov, M.B. Udalkin. Reviewed by N.S. Babichev, A.G. Gudz'. Gor. zhur. no.7:78-79 Jl '57. (MLRA 10:8)

1. Kafedra provedeniya gornykh vyrabotok Donetskogo industrial'nogo instituta.

(Shaft sinking) (Shilov, N.V.) (Udalkin, M.B.)

ORLOV, Vasiliy Vasil'yevich; PONOMARENKO, Aleksey Kuz'mich; GUDZ', Aleksandr Grigor'yevich; PETROV, Anatoliy Moiseyevich; TARASENKO, Vasiliy Konstantinovich; SIDYAK, A.Ya., otv. red.; VAYNBERG, D.A., red.; PLETENITSKIY, V.Yu., tekhn. red.

[Handbook of examples and problems on mining engineering] Sbornik primerov i zadach po provedeniiu gornykh vyrabotok. Khar'kov, Izd-vo Khar'kovskogo gos. univ. im. A.M.Gor'kogo, 1961. 352 p. (MIRA 15:2)
(Blasting) (Mining engineering)

GUDZ', A.G., gornyy inzh.

Portable casing for the concreting of bunton sockets. Ugol' Ukr. 5 no.2:33 '61. (MIRA 14:3)
(Mine timbering)

ORLOV, V.V., kand.tekhn.nauk; GUDZ', A.G., gornyy inzh.

Determining rock pressure on the supports of horizontal workings.
Ugol' Ukr. 5 no.4:1-5 Ap '61. (MIRA 14:4)

1. Donetskiy politekhnicheskiy institut.
(Rock pressure) (Mine timbering)

GUDZ', A.G., gornyy inzhener

Stage with template for shaft lining. Ugol' Ukr. 5 no.11:34-35 N '61. (MIRA 14:11)

(Mine timbering)
(Coal mines and mining--Equipment and supplies)

GUDZ', A.G., inzh.

Suggestions for increasing operation safety of mine hoists.
Bezop.truda v prom. 6 no.4:25-26 Ap '62. (MIRA 15:5)
(Mine hoisting--Safety appliances)

GUDZ', A.G., gornyy inzh.

Readers' response to S.M.Ostrovskii and E.V.Petrenko's article "Multiple rope hoists with guide ropes are indispensable in the mines of the central area of Donets Basin." Ugol' Ukr. 6 no.5: 44 My '62. (MIRA 15:11)

(Mines hoisting) (Ostrovskii, S.M.) (Petrenko, E.V.)

GUDZ', A.G., gornyy inzh.

Dismountable system for the preliminary hanging of rail guides.
Ugol' Ukr. 6 no.9:36 S '62. (MIRA 15:9)
(Mine timbering)

ORLOV, Vasiliy Vasil'yevich; YANCHUR, Aleksandr Mikhaylovich; BABICHEV, Nikolay Semenovich; PETROV, Anatoliy Moiseyevich; PONOMARENKO, Aleksey Kuz'mich; GUDZ', Aleksandr Grigor'yevich; POKROVSKIY, N.M., zasl. deyatel' nauki i tekhniki RSFSR, prof., doktor tekhn. nauk, retsenzent; CHERNEGOVA, E.N., ved. red.

[Mine workings and their support] Provedenie i kreplenie gornykh vyrabotok. [By] V.V.Orlov i dr. Moskva, Nedra, 1965. 496 p. (MIRA 18:7)

USSR / Cultivated Plants. Cereal Crops. M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58559

Author : Kravchuk, L. I.; Vol'tovs'ka, O. B.; Gudz', G. A.; Dubinina, I. A.; Chekmar'ova, L. N.

Inst : Cherkask. Pedagogical Institute

Title : Preliminary Data on High Yielding Intervarieties of Hybrids of Corn, Produced at the Agrobiological Station of the Pedagogical Institute

Orig Pub : Nauk. Zap. Cherkas'k. derzh. ped. inst, 1957, 11, 301-311

Abstract : No abstract given

Card 1/1

L 01088-67 DJ
ACC NR: AP6026312 (A) SOURCE CODE: UR/0113/66/000/005/0029/0031

AUTHOR: Genbom, B. B. (Candidate of technical sciences); Kobylyanskiy, V. N.; Kizman, A. M.; Gudz, G. S.; Ryabov, A. V.; Gomma, E. F.; Starinskiy, A. D.; Atoyan, K. M. (Candidate of technical sciences)

ORG: L'vov Polytechnical Institute (L'vovskiy politekhnicheskiy institut); L'vov Bus Plant (L'vovskiy avtobusnyy zavod)

TITLE: Experimental investigation of the power capacity of brake mechanisms

SOURCE: Avtomobil'naya promyshlennost', no. 5, 1966, 29-31

TOPIC TAGS: vehicle braking system, test stand, vehicle component

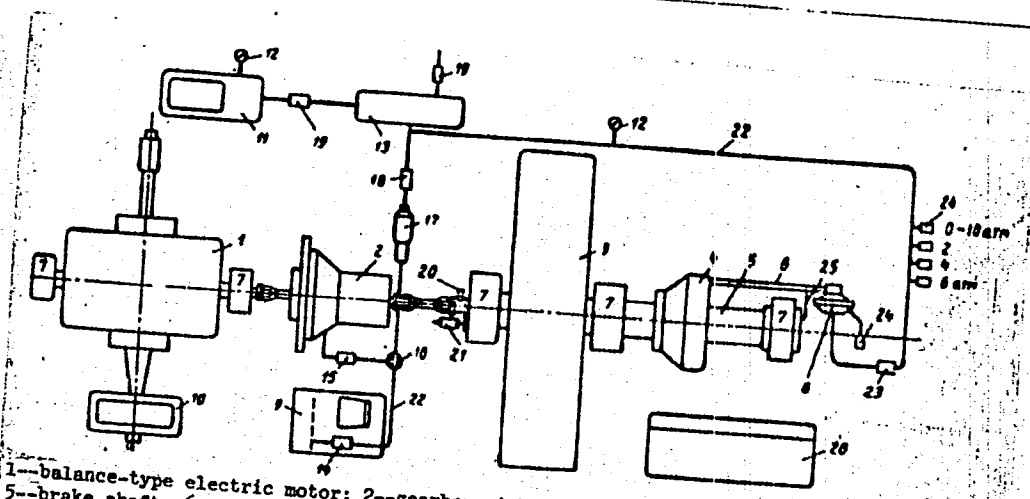
ABSTRACT: The authors describe a combination stand developed at the L'vov Polytechnical Institute to be used for both inertial and constant braking tests. A diagram of the installation is shown in the accompanying figure. The principal elements of the stand are: 100 kw electric motor 1; clutch and gearbox 2 mounted on the clutch bracket; flywheel 3 with a moment of inertia of 16 kg·sec^2; brake mechanism 4 with the drum mounted on the flywheel shaft while the disc and shoes are mounted on the clutch shaft 5 which is coaxial with the flywheel shaft. The stand is equipped for measuring the braking moment and the moment on the release shaft, the temperatures of the brake linings and drum, the rotational velocity of the drum, the pressure in the brake chamber and rod travel. Provision is made for programmed control of brake operation. The device may be used for studying the effect of a variety of factors on the power capacity of braking mechanisms. Orig. art. has: 4 figures, 3 tables.

Card 1/2

UDC: 629.11.013.001.5

L 01088-67

ACC NR: AP6026312



1--balance-type electric motor; 2--gearbox with clutch; 3--flywheel; 4--brake mechanism; 5--brake shaft; 6--release shaft; 7--support bearings; 8--brake chamber; 9--panel for controlling clutch and gear ratio; 10--VKM-57 weighing device; 11-main receiver; 12--manometer; 13--working receiver; 14--hydraulic cylinder; 15--clutch disconnection cylinder; 16--valve; 17--pneumohydraulic cylinder; 18--GA-13M electric valve; 19--EKR-8 electropneumatic valve; 20--contact breaker; 21--DT-6M tachogenerator; 22--pipeline; 23--EK-49 electropneumatic valve; 24--pressure gauge; 25--rod travel gauge; 26--control panel.

SUB CODE: 13/ SUBM DATE: None/ ORIG REF: 002

Card 2/2 vlr

S/169/62/000/007/001/149
D228/D307

AUTHOR: Gudz, I. N.

TITLE: Secular change in elevations and shorelines in connection with the movement of the earth's poles

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 3, abstract 7A1 (Nauchn. zap. L'vovsk. politekhn. in-ta, Ser. geod., no. 8, 1961, 23-53)

TEXT: The investigation's basis was the principle developed by N. K. Migal' that as a result of denudation processes taking place on its surface, the earth's rigid part may complete a turn with respect to its existing figure during geologic time which, in its turn, will induce marine transgressions and regressions. According to the determinations of N. K. Migal', in the Paleogene epoch the palegoid's north pole was displaced for the angular distance $S = 20^{\circ}16'$ with respect to the present north pole. The influence of this shift on the position of the world ocean's shoreline is clarified in the work. Utilizing the present data H for ground sur-

Card 1/2

Secular change in ...

S/169/62/000/007/001/149
D228/D307

face points, the author derived values for the heights (or depths) h' of points on the earth's physical surface for five cases when: $S_1 = 2^{\circ}16'$, $S_2 = 1^{\circ}48'8$, $S_3 = 1^{\circ}21'6$, $S_4 = 0^{\circ}54'4$, $S_5 = 0^{\circ}27'7$ (a formula is given for determining the values of h'). Calculations of h' were made for a series of points, situated every 5° of latitude and longitude (the density of points was increased at sites of the probable position of the old shoreline). Five world maps, showing the distribution of the land and the sea in relation to the magnitudes of S, were compiled. The maps testify that polar movements can cause substantial changes in the disposition of the shorelines of oceans and seas. Considerable correspondence is revealed between the map of the land and sea distribution, with $S = 2^{\circ}16'$, and the paleogeographic map of the Paleogene period, when a large part of the continents was subjected to a marine transgression. [Abstracter's note: Complete translation.]

Card 2/2

GUDZ', P.I., Cand Phys-Math Sci—(diss) "Kinetics of formation of epsom-rose crystals in supersaturated aqueous solutions." Tbilisi, 1957. 16 pp with graphs (Min of Higher Education USSR. Tbilisi St U im I.I. Lochnikov), 150 copies (KL,43-57, 119)

GUDZ', P.M. [Hudz', P.M.]

Kinetics of crystal formation in aqueous saccharose solutions as affected by intensive stirring. Pratsi Od. un. zbir. mol. vchen. un. 148 no.3:7-16 '58 (MIRA 13:3)

1. Nauchnyy rukovoditel' - dots. G. L. Mikhnevich [H. L. Mikhnevych]
(Crystallization) (Sugar)

[illegible], P. [illegible].

[illegible]', P. [illegible] -- "Aspects of the Collateral Blood Circulation and Morphological Changes in the Nerves and Muscles of the Pelvic Extremities of the Rabbit under Conditions of Development of Detour Blood Circulation." L'vov State Medical Inst. L'vov, 1955. (Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

USSR/Human and Animal Morphology - Normal and Pathological. S
Muscles.

Abs Jour : Ref Zhur Biol., No 11, 1958, 50319

Author : Gudz', P.Z.

Inst : Kiev Institute of Physical Culture

Title : On the Problem of Structural Changes of the Femoral Muscles Arising After Ligation of the External Iliac and Femoral Arteries of the Rabbit. Experimental and Morphological Studies (Report 1)

Orig Pub : Tr. Kiyevsk. in-ta fiz. kul'tury, 1957, vyp. 2, 127-128

Abstract : Following the ligation of the external iliac and femoral arteries, morphological changes of the muscular fibers occur, which are most marked and more persistent in the musculus quadriceps femoris. The changes are generally reversible. The collaterals which develop compress the

Card 1/2

Abs Jour : Ref Zhur Biol., No 11, 1958, 50319

adjacent muscular fibers, which is apparently not without effect on the condition of the muscle. -- A.V. Kuz'mina-Prigradova

Q-5

USSR / Farm Animals. Rabbits.

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 64519

Author : Gudz', P. Z.
Inst : Kiev Institute of Physical Culture.
Title : On the Muscular Arterial Anastomoses of Iliac and Femoral Arteries of the Rabbit (Report I)

Orig Pub : Tr. Kiyevsk. in-ta fiz. kul'tury, 1957, vyp. 2, 129-131.

Abstract : The system of iliac and femoral arteries of the rabbits has a great number of muscular anastomoses which represent a powerful preexistent roundabout channel. A diagram of the anastomoses is given.

Card 1/1

USSR / Human and Animal Morphology (Normal and Pathological). The Peripheral Nervous System. S-2

Abs Jour: Ref Zhur-Biol., No 10, 1958, 45550.

Author : Gudz', P. Z.
Inst : Kiev Institute of Physical Culture.
Title : Morphological Changes in the Femoral Nerve, Arising as a Result of Impairment of the Pelvic Terminus Blood Supply. Experimentally-Morphological Investigation (Communication No 1)

Orig Pub: Tr. Kievsk. in.-ta fiz. kul'tury, 1957, Vyp. 2, 133-135.

Abstract: The condition of the nervous apparatus in the zone of development of collaterals was studied in 18 rabbits with ligatured external and femoral arteries. The animals were killed after 2-369 days. The bicipital and quadriceps femoris muscles,

Card 1/2

USSR / Human and Animal Morphology (Normal and Pathological). The Peripheral Nervous System. S-2

Abs Jour: Ref Zhur-Biol., No 10, 1958, 45550

Abstract: as well as the sciatic, femoral and obturator nerves, were investigated. The changes in the nerves are of the ischemic neuritis type and are fundamentally reversible. The degree of the morphological nerve changes (up to fragmentation) depends on the period of time it takes to reestablish the blood supply of the innervated muscle. Much faster and significant changes take place in the neuromuscular and preterminal branches. The vessel collaterals, developing in the nerve trunks, split them into fascicles, which fact brings about the functional impairment.-- T. N. Ulissova

Card 2/2

S

USSR/Human and Animal Morphology - Normal and Pathological. Circulatory System.

Abs Jour : Ref Zhur Biol., No 11, 1958, 50286

Author : Gudz', P.Z.
Inst :
Title : Dynamics of the Development of Collaterals

Orig Pub : Vrachebn. delo, 1957, No 3, 257-260

Abstract : Experiments involving ligating the extent of the external iliac and femoral arteries were performed on rabbits, since the ramification of the main arterial trunks of their pelvis and the pelvic extremity corresponds to that in man. The length of the experiments on 14 rabbits, was 5-1095 days. In the early periods after the ligation, all the pre-existing anastomoses are brought into action. At the same time, the blood vessels of the skin become considerably enlarged, and thereafter develop the main muscular collaterals (in the biceps). Later on,

Card 1/2

USSR/Human and Animal Morphology - Normal and Pathological. S
Circulatory System.

Abs Jour : Ref Zhur Biol., No 11, 1958, 50286

collaterals develop from vasa nervorum. -- A.V. Kuz'mina-Prigradova

Card 2/2

21-1-22/26

AUTHOR: Gudz', P.Z.

TITLE: On Anastomoses of the Branches of the Iliac and Femoral Arteries of the Rabbit (Ob anastomozakh vetvey podvzdoshnykh i bedrennoy arteriy krolika)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koy RSR, 1958, # 1, pp 94-99 (USSR)

ABSTRACT: The author investigated anastomoses between the branches of the iliac and femoral arteries in rabbits employing the X-ray method.

It has been proved that anastomoses between arteries represent pre-existing circuitous paths. Their study, therefore, is of considerable interest for determining the trend of development of circuitous paths after exclusion of the arterial trunks.

The main pre-existing collateral paths are intramuscular arterial anastomoses. However, the arterial anastomosis of skin and nerves also has a certain importance in the development of collateral paths.

The various anastomoses described in the paper represent a pre-existing network of circuitous blood vessels in the pelvic limbs of the rabbit.

Card 1/2

21-1-22/26

On Anastomoses of the Branches of the Iliac and Femoral Arteries of the Rabbit

The article contains 3 photos, 1 figure, 2 German and 11 Russian references.

ASSOCIATION: Kiyev Institute of Physical Culture (Kyivs'kyy instytut fizychnoi kul'tury)

PRESENTED: By Academician of the Ukrainian Academy of Sciences V.G. (V.H.) Kas'yanenko

SUBMITTED: 12 February 1957

AVAILABLE: Library of Congress

Card 2/2 1. Rabbits 2. Medical research

GUDZ, P.Z. (Kiyev)

Development of collaterals following ligation of the femoral and external iliac arteries in a rabbit. Eksper.khir. 3 no.5:59 S-O '58 (MIRA 11:11)

(EXTREMITIES, LOWER--BLOOD SUPPLY)

GUDZ', P.Z., dots., RADZIYEVSKIY, A.R., kand.med.nauk, ARKHIPOVICH, A.A,. kand.med.nauk

Role of the hypogastric artery in the collateral ciruculation of the pelvic extremity. Vrach.delo no.10:1075-1078 O '58 (MIRA 11:11)

1. Kafedra anatomii (zav. - prof. V.V. Kolesnikov) Kiyevskogo instituta fizicheskoy kul'tury.
(HYPOGASTRIC ARTERY)
(EXTREMITIES, LOWER--BLOOD SUPPLY)

KOLESNIKOV, V.V. (Kiyev, ul. Gor'kogo, 19, kv.7); GUDZ', P.Z. (Kiyev, ul. Shchekavitskaya, 36, kv.23); SHAROVA, T.V. (Kiyev, ul. Kirova, 6, Stomatologicheskaya poliklinika)

Potential properties of anastomoses of the branches of the external carotid artery. Arkh.anat.gist.i embr. 37 no.11:32-38 N '59. (MIRA 13:4)

1. Kafedra funktsional'noy anatomii (zaveduyushchiy - prof. V.V. Kolesnikov) Kiyevskogo gosudarstvennogo instituta fizicheskoy kul'tury.

(CAROTID ARTERY physiol.)

GUDZ', P.Z.

Morphological changes in the nerves of the thigh in rabbits during the development of collateral circulation; experimental morphological studies. Arkh.anat.gist.i embr. 37 no.12:80-88 D '59. (MIRA 13:5)

(HIP innervation)
(HIP blood supply)
(HIP physiol.)

GUDZ', P.Z. [Hudz', P.Z.]; RADZIYEVSKIY, A.R. [Radziievs'kyi, O.R.]

Development of collaterals following bilateral ligature of main arteries of the pelvic extremities of rabbits. Dop.AN URSR no.5:667-672 '60. (MIRA 13:7)

1. Kiyevskiy institut fizicheskoy kul'tury. Predstavleno akademikom AN USSR V.G.Kas'yanenko [V.H.Kas'ianenko].
(EXTREMITIES, LOWER—BLOOD SUPPLY)

GUDZ', P.Z. [Hudz', P.Z.]

Morphological changes in muscles due to heavy physical strains.
Dop. AN URSR no.11:1523-1527 '61. (MIRA 16:7)

1. Institut zoologii AN UkrSSR i Kiyevskiy institut fizicheskoy kul'tury. Predstavleno akademikom AN UkrSSR V.G.Kas'yanenko [Kas'ianenko, V.H.].
(Muscle) (Exercise)

GUDZ', P.Z.

Morphological changes in muscles and nerves of the extremities under conditions of "overtraining". Arkh. anat., gist. i embr. 45 no.7:55-63 Je '63. (MIRA 17:4)

1. Kafedra funktsional'noy anatomii (zav. - dotsent P.Z. Gudz') Kiyevskogo instituta fizicheskoy kul'tury i Otdel evolutsionnoy morfologii (zav. - akademik AN UkrSSR prof. V.G. Kas'yanenko) Instituta zoologii AN UkrSSR. Adres avtora: Kiyev, Fizikul'turnaya ulitsa, 1, Institut fizkul'tury, kafedra funktsional'noy anatomii.

GUDZ', P.Z. [Hudz', P.Z.]

Morphologic changes in the myocardium under physical overstress. Fiziol. zhur. [Ukr.] 10 no.2:262-265 Mr-Ap '64. (MIRA 18:7)

1. Kafedra funktsional'noy anatomii Kiyevskogo instituta fizicheskoy kul'tury i otdel evolyutsionnoy morfologii Instituta zoologii AN UkrSSR.

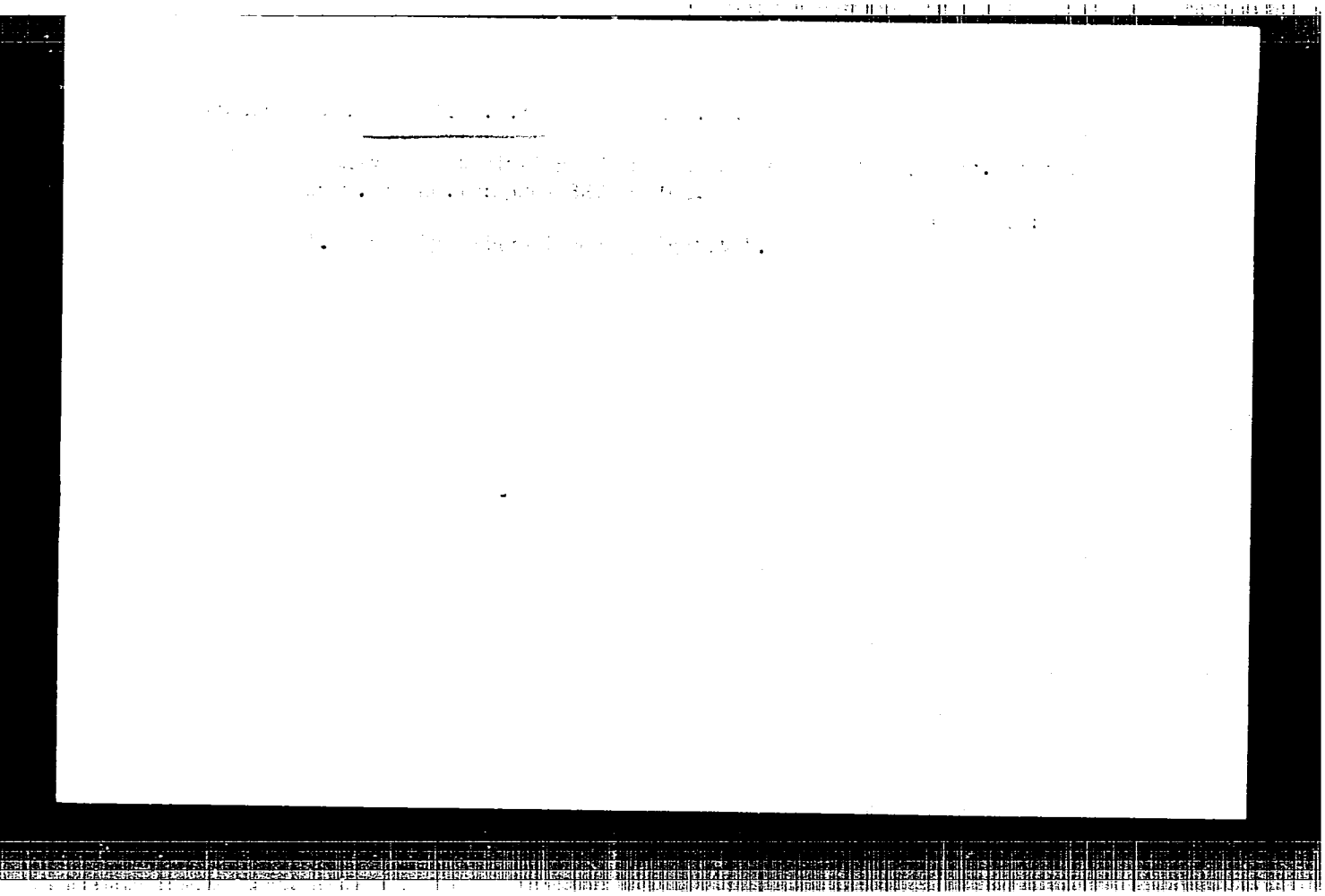
GUDZ', P.Z. [Hudz', P.Z.]

State of the intraorganic blood supply of the extremity muscles during intense physical stress. Fiziol.zhur. [Ukr.] 11 no.4:477-484 Jl-Ag '65. (MIRA 18:10)

1. Kafedra funktsional'noy anatomii Kiyevskogo instituta fizicheskoy kul'tury.

GUDZ', V., inzh.; KHODZITSKIY, Ye., inzh.

Give serious attention to the preparation for work. Prom.stroi. i inzh.soor. 3 no.2:12-16 Mr-Ap '61. (MIRA 15:3)
(Construction industry)



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000617230004-8"

L 36369-66 EWP(j)/EWP(m)/T RM

ACC NR: AP6009873 (A) SOURCE CODE: UR/0413/66/000/004/0068/0068

INVENTOR: Gudz', V. N.; Vdovina, L. I.

33

B

ORG: none

TITLE: Preparation of a nitrogen-containing polymer. Class 39, No. 178981

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 68

TOPIC TAGS: polymer, nitrogen polymer, polycondensation, ammonia, acetaldehyde

ABSTRACT: An Author Certificate has been issued describing a method of making a nitrogen-containing polymer by polycondensation of acetaldehyde and ammonia. To increase the molecular weight of the polymer, ammonia gas is used in the presence of acetic acid. [LD]

SUB CODE: 07,11/ SUBM DATE: 17Aug64

Card 1/1 UDC: 678.652.002.2

- - GUDZENKO, A. A.

M

USSR/Cultivated Plants. . Fruits. Berries. .

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34811

Author : Gudzenko A.A.
Inst :
Title : New Varieties of Prune Trees in Kazakhstan

Orig Pub Sad i ogorod, 1957, No 6, 44-46

Abstract : The foundation for the fruit culture in Central Kazakhstan was established by the Agricultural Experimental Station of Kargandinskiy, which started work in 1932 in the village of Dolinskoye. At the present time, the experimental garden has been enlarged up to 142 h., and in the sovkhozes and kolkhozes of Karagandinskaya Oblast 1,500 h. of fruit trees and small fruit gardens have been established. The high yield of these plantings is stressed. Described are 6 varieties of prune trees, raised by means of hybridization of the Canadian and Ussuriyskiy prunes and by analytical selection of the Canadian prune. Varieties are highly

Card : 1/2

USSR/Cultivated Plants. Fruits. Berries. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34811

yielding and winter-sturdy. At the age of 7 years, one tree of Dolinskiy rosy (K-242) yields 24.8 kg, with an average weight of the fruits of 25 g, and a sugar content of 8 to 10 percent, ripening at the beginning of September. Dolinskaya belladonna (UK-200) was admitted into the standard variety list of the territory of Karagandinskaya Oblast -- Fortunatov

Card : 2/2

GUDZENKO, A.A., Cand Agr Sci -- (diss) "Attempt at cultivation of new sorts of plums in North Kazakhstan." Michurinsk, 1958, 18 pp (Min of Agr USSR. Fruit and Vegetable Inst im I.V.Michurin) 100 copies

(KL, 50-58, 126)

VO KRASNOSEL'SKIY, S.I.; GUDZENKO, A.I.

Radiation patterns of arch-type antenna arrays. Izv. vys. ucheb. zav.; radiotekh. 8 no.5:574-580 S-O '65. (MIRA 18:12)

1. Submitted July 3, 1964.

GUDZENKO, A.I.

Radiation patterns of highly directional spherical antenna lattices. Radiotekhnika 20 no. 12:43-47 D '65
(MIRA 19:1)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.

ACCESSION NR: AP3003400 S/0142/63/006/003/0315/0316

AUTHOR: Gudzenko, A. I.

TITLE: Forming of a multilobe directional pattern by means of modulated delay structures

SOURCE: IVUZ. Radiotekhnika, v. 6, no. 3, 1963, 315-316

TOPIC TAGS: multilobe directional pattern, surface wave antenna, modulated impedance structure

ABSTRACT: An impedance modulation method for obtaining multiple direction patterns from a plane surface wave antenna is discussed. The required condition, i.e., that the field above the impedance plane have a definite number of "fast" space harmonics corresponding to each directional lobe, is accomplished by modulating the impedance surface in a known periodic manner. An advantage of this method over other possible ones is that the interval of the modulating function and the change in impedance over the antenna length are arrived at for

Card 1/3

ACCESSION NR: AP3003400

each lobe independently of any other lobe. The impedance modulating function chosen is rectangular; it is expanded into a Fourier series and the contribution of each sinusoidal component calculated. The theory was verified by a two-lobe surface wave antenna model, whose delay structure consisted of a brass base overlaid with paraffin into which an array of rectangular slots was cut. The resulting directional pattern is given for the case of a 60-cm long modulated structure at a wavelength of 32 mm and a surface wave propagation constant of 1.22. This shows one lobe to be 70 degrees above the plane and a second to be 110 degrees. The half-power beamwidths of both lobes were on the order of 3 degrees; side lobes between 0 and 50 degrees were comparable to those of an unmodulated antenna. Orig. art. has: 1 figure and 2 formulas.

ASSOCIATION: Kafedra sistem radioupravleniya Ryazanskogo radiotekhnicheskogo instituta (Department of Radio-Direction Systems of the Ryazan Radiotechnical Institute)

Card 2/3

ACCESSION NR: AP3003400

SUBMITTED: 29Apr62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: 00 NO REF SOV: 001 OTHER: 000

Card 3/3

L 34210-65 EWT(1)/EED-2/EWA(h) Pab

ACCESSION NR: AP5007388 B/0286/65/000/004/0042/0042

AUTHOR: Gudzenko, A. I.

TITLE: Phase shifter. Class 21, No. 168353

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 42

TOPIC TAGS: shf phase shifter, waveguide phase shifter, polarization plane changer

ABSTRACT: The Author Certificate introduces a phase shifter with the control elements placed in a field of shf oscillations. The device is in the form of a T-junction with excitation coupling loops which are formed by a conductor and the control element connected in series (see Fig. 1 of Enclosure). To achieve a sudden change in the plane of polarization of the shf oscillation, the waveguide is of circular cross section and the conductor, with radially mounted control elements, lies along its axis. Orig. art. has: 1 figure. [KM]

ASSOCIATION: none

SUBMITTED: 05Aug63 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3212

Card 1/1

L 27839-66 EWT(l)/T/FCS(k) WR
ACC NR: AP6000522 SOURCE CODE: UR/0142/65/008/005/0574/0580

AUTHOR: Voskresenskiy, D. I.; Gudzenko, A. I.

ORG: none

TITLE: Directional patterns of arc-shaped antenna arrays

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 5, 1965, 574-580

TOPIC TAGS: antenna array, antenna directivity

ABSTRACT: Spatial directional patterns of a pencil-beam-type arc-shaped array are considered, when the arc radius is large and the spacing between adjacent radiators is small as compared to the wavelength; the effects of the amplitude distribution of feed currents and of the directivity of individual radiators are explored. Formulas are developed for the approximate calculation of directional patterns by means of equivalent linear antennas. The directional pattern of an arc-shaped array is determined by Bessel functions whose coefficients are obtained from Fourier expansions for each type of amplitude distribution over the arc and for the directivity of each radiator. The arc-shaped array is directional in two planes.

Card 1/2 UDC: 621.396.67

L 27839-66

ACC NR: AP6000522

O

Hence, its directive gain is higher than that of a linear cophasal antenna whose length is equal to the projection of the arc on the normal to the major-lobe direction. Orig. art. has: 4 figures and 22 formulas.

SUB CODE: 09 / SUBM DATE: 18Jul63 / ORIG REF: 005 / OTH REF: 001

Card 2/2 TS

SOURCE CODE: UR/0108/65/020/012/0043/0047

ACC NR: AP6014684

AUTHOR: Gudzenko, A. I. (Active member)

ORG: Scientific and Technical Society of Radio Engineering and Electrocommunication (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Directional patterns of pencil-beam spherical antenna arrays [Author's abstract of his report at the 20th All-Union Scientific Conference NTORiE, 8 May 64]

SOURCE: Radiotekhnika, v. 20, no. 12, 1965, 43-47

TOPIC TAGS: antenna directional pattern, antenna array, hemispheric array, antenna directivity

ABSTRACT: A set of identical radiators located on a long-radius sphere, which shapes a pencil beam in the direction of the sphere outer normal, is called the spherical antenna array. I. H. Harris et al. (IRE Trans., AP-10, no. 3, 1962) and M. Hoffman (IEEE Trans., A-11, no. 4, 1963) investigated the characteristics of such an array and gave a method of engineering design that involved cumbersome computer calculations. The present article offers a simplified method and formulas for the engineering design; assumptions: the radiators are mounted on a conducting

UDC: 621.396

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length

...them are small; array size greatly exceeds the wave- ...ula for the directional pattern (meridionally deployed radiators) of a hemispheric array has this form: $E(\theta)\approx\frac{\lambda\sin^2\theta}{|4\pi r\sin^3\frac{\theta}{2}|}\sqrt{\frac{\lambda}{r\sin\theta}}\exp\left[-i\frac{2\pi}{\lambda}r\left(\sin\theta-\frac{\pi}{4}\right)\right]$. Tabulated directional-pattern formulas show that: (1) The functions of amplitude distribution of radiator currents have an essential effect on the array directional pattern; (2) With a constant amplitude distribution, an increased directivity of an individual radiator in a plane results in a wider major lobe and narrower minor lobes; (3) With random orientation of radiators, the array-radiation field is determined by the sum of the fields of orthogonal current components on the sphere surface. Orig. art. has: 2 figures, 3 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 05Jun64 / ORIG REF: 004 / OTH REF: 002

Card 2/2

MATSKOV, Fedor Filippovich, prof.; GUDZENKO, G.S.[Hudzenko, H.S.], otv. za vypusk; MASLOBOYSHCHIKOVA, O.S., [Masloboishchykova, O.S.], red.; POTOTSKAYA, L.A.[Potots'ka, L.A.], tekhn. red.

[Plant physiology]Fiziologiia roslyn; korotkyi kurs lektsii slia studentiv-zaochnykiv agronomichnoho i ekonomichnoho fakul'tetiv sil's'kohospodars'kykh vuziv. Kyiv, Derzhsil'hospvydav URSR. No.1[Physiology of plant nutrition]Fiziologiia zhyvlennia roslyn. 1962. 137 p. (MIRA 16:3)
(Plants--Nutrition)

1. Gudzenko, I. P.
2. USSR (600)
4. Agricultural Machinery
7. Potato planting machinery, Sel'khozashina, No. 10, 1952

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

GUDZENKO, Ivan Petrovich; KOBYLYAKOV, L.M., redaktor; PAVLOVA, M.M., tekhnicheskiy redaktor

[Potato harvesting machines] Kartofeleuborochnye mashiny. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 199 p. (MLRA 9:9)
(Potatoes--Harvesting) (Harvesting machinery)

GUDZENKO, I.P.

Machinery for the over-all mechanization of potato growing. Trakt.i sel'khozmash. no.6:19-25 Je '59. (MIRA 12:9)
(Potatoes) (Agricultural machinery)

GUDZENKO, I.P.; FIRSOV, N.V.; GORBUNOV, V.R., inzh., retsenzent; ZHURAVLEVA, M.N., red.izd-va; YEGORKINA, L.I., red. izd-va; SMIRNOVA, G.V., tekhn. red.

[Machines for raising and harvesting potatoes]Mashiny dlia vozdelyvaniia i uborki kartofelia. Moskva, Mashgiz, 1962. 269 p. (MIRA 16:3)

(Potato machinery)

ZHUKOV, Arkadiy Vladimirovich, kand. tekhn. nauk; GUDZENKO, K.V., otv. red.; TEPLYAKOVA, A.S., red.

[Latest progressive building materials in the Ukrainina S.S.R.] Noveishie progressivnye stroitel'nye materialy v Ukrainskoi SSR. Kiev, 1961. 39 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Ukrains'koi SSR. Ser.7, no.5) (MIRA 14:9)
(Ukraine--Building materials)

GUDZENKO, L. I.

2

621.373.4 2061

Fluctuations in a Valve Oscillator in the Presence of Grid Current. L. I. Gudzenko. (*Radiotekhnika i Elektronika*, Sept. 1956, Vol. 1, No. 9, pp. 1240–1254.) Phase and amplitude fluctuations in tuned-anode and tuned-grid oscillators due to the thermal noise of the resistance in the tuned circuit and the shot noise in the anode and grid currents are considered; the depression of the shot noise by the space charge is neglected. Fluctuations in a tuned-grid oscillator with automatic cathode bias are also discussed.

Elec

37-7004

Physics Inst. im. P.N. Lebedev, AS USSR

SOV/109-3-7-19/23

AUTHORS: Bunkin, F. V., Gudzenko, L. I.

TITLE: On the Uni-Dimensional Amplitude and Phase Distributions of a Stationary Process (Ob odnomernykh raspredeleniyakh amplitudy i fazy statsionarnogo protsessa)

PERIODICAL: Radiotekhnika i elektronika, 1958, Vol 3, Nr 7, pp 968-969 (USSR)

ABSTRACT: A stationary process can be described by:

$$\xi(t) = A(t)\cos\left[\omega_0 t + \theta(t)\right] \qquad (2)$$

where $A(t)$ is the amplitude and $\theta(t)$ is the phase of the process; this representation is true provided the spectrum of $\xi(t)$ is comparatively narrow (lies in the vicinity of the centre frequency ω_0). It is necessary to find the phase and amplitude distribution functions, W_ξ and W_A. W_A satisfies Eq.(3), in which the kernel K is expressed by Eq.(4), whose coefficients c_n are defined by Eq.(5). The final expression for W_A is in the form of Eq.(9). On the other hand, the phase distribution W_θ is found to be uniform and is expressed by Eq.(11). Eqs.(9) and (11) give a complete

On the Uni-Dimensional Amplitude and Phase Distributions of a Stationary Process

solution of the problem. The authors are grateful to Prof. S. M. Rytov for a number of remarks. The paper contains 6 references, 4 of which are Soviet, 1 English and 1 French.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute im. P. N. Lebedev, Academy of Sciences USSR)

SUBMITTED: December 3, 1957.

1. Phase modulation 2. Mathematics

Card 2/2

SOV/109-4-1-13/30

AUTHOR: Gudzenko, L.I.

TITLE: Oscillation Amplitude Fluctuations in an Independent Vacuum-tube Oscillator (O fluktuatsiyakh amplitudy kolebaniy avtonomnogo lampovogo generatora)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 1, pp 97 - 108 (USSR)

ABSTRACT: A simple tuned-grid, single-tube oscillator is considered. It is assumed that the tube draws no grid current and that the principal source of the inherent fluctuations in the oscillator is the thermal noise of the ohmic resistance of the tuned circuit. If the effect of the anode load can be neglected, the operation of the oscillator (Figure 1) can be described by:

$$LC\frac{d^2V}{dt^2} + RC\frac{dV}{dt} - M\frac{di_a}{dt} - \mathcal{E}_R = V$$

where i_a is the anode current and $\mathcal{E}_R$ is the fluctuation electromotive force. If $x = V/V_o$ and $t_1 = \omega_o t$, the above equation can be written as Eq (1) where μ is a small

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parameter and other quantities are defined by the equations on p 98. If the amplitude of the oscillations is r and the phase is η, and if these are slowly changing quantities, the system can be described by Eqs (2) and (3), in which functions F denote the quasi-monochromatic components of an external force $F(t)$. Since the spectrum of the external force is uniform throughout the bandwidth of the oscillator, the correlation functions of the quasi-monochromatic components can be written as Eqs (4), where C is expressed by Eq (4'). The amplitude probability density can be found from Eq (5), where B is a parameter characterising the statistical spread of the amplitude fluctuations. The amplitude can be represented as $r(\tau) = r_0 + \xi(\tau)$, so that for small τ Eq (2) can be written as Eq (2'). By solving Eq (2'), it is found that B is given by Eq (6). Consequently, the solution of Eq (5) is in the form of Eqs (7) where D is found from Eq (8). The above formulae are employed to analyse the case when the anode current is represented by a third-degree

Oscillation Amplitude Fluctuations in an Independent Vacuum-tube Oscillator

polynomial. In this case, the constant D and the function ψ are given by Eqs (10) and (10'), in which u and v are defined by the equations on p 100. The amplitude probability density is approximately expressed by Eq (11). The average values of the amplitude fluctuation and the average square amplitude deviation are expressed by the first two equations on p 102; these quantities are plotted as a function of u in Figure 3. If the anode current of the oscillator is represented by a 5th-degree polynomial (where only the odd terms are considered), the function ψ is defined by Eq (12), in which the parameters γ, α and β are defined by the first equation on p 103. The average value of the amplitude fluctuation and the average square amplitude deviation are given by the equations in the middle of p 106; these are valid for various values of α. The author thanks Professor S.M. Rytov for suggesting the subject and directing this work and V.M. Antonova for help in carrying out the calculations.

SOV/109-4-1-13/30

Oscillation Amplitude Fluctuations in an Independent Vacuum-tube Oscillator

There are 6 figures and 6 references, 5 of which are Soviet and 1 French.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev of the Ac.Sc.USSR)

SUBMITTED: April 8, 1957

Card 4/4

SOV/109-4-6-25/27

AUTHOR: Gudzenko, L.I.

TITLE: Periodically Non-stationary Processes (Letter to the Editor) (O periodicheski nestatsionarnykh protsessakh) (Pis'mo v redaktsiyu)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 6, pp 1062 - 1064 (USSR)

ABSTRACT: The periodically non-stationary processes are encountered in radiophysics. The processes are random time functions and are characterised by periodically changing average values and correlation functions. General characteristics of such processes are considered in this article. It is assumed that z_t represents the fluctuations and c_ω is the spectral density. The auto-correlation function $b(t, \tau)$, the spectral correlation function $D(\omega, \nu)$ and the spectral intensity function of the process z_t can be represented by Eqs (1). If the function has a period $\vartheta_o = 2\pi/\omega_o$, the auto-correlation function can be represented in terms of a Fourier series having coefficients

Card1/2

$\psi_k(\tau)$. The properties of the coefficients are defined by Eq (5). The average value of the process z_t can also be represented as a Fourier series with coefficients a_k .

The author expresses his gratitude to S.M. Rytov, A.M. Yaglom and F.V. Bunkin for their interest in this work.

There are 2 Soviet references.

SUBMITTED: January 29, 1959

Card 2/2

24(0)
AUTHOR: Gudzenko, L. I. SOV/20-125-1-15/67

TITLE: Small Fluctuations in a Primarily Non-linear Auto-oscillatory System (Malyye fluktuatsii v sushchestvenno nelineynoy avtokolebatel'noy sisteme)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 1, pp 62-65 (USSR)

ABSTRACT: The small fluctuation force acting upon a system with a degree of freedom is assumed to be described by a two-dimensional stationary random process λf_x, λf_y (which is given in the phase surface). The equation of the system is given in the form $dx/dt = P(x,y) + \lambda f_x(x,y,t)$, $dy/dt = Q(x,y) + \lambda f_y(x,y,t)$. In the neighborhood of $\lambda = 0$ the coordinates x,y are replaced by n,s, and in this manner one obtains $dn/dt = N(n,s) + \lambda f_n(n,s,t)$, $ds/dt = S(n,s) + \lambda f_s(n,s,t)$. The conditions $n = 0$, $s = \theta(t)$ occur in addition hereto. The function $Q(t)$ increases monotonously and can therefore be used as a new argument instead of t. The course of computation is followed up step by step, and the solutions of the above-mentioned transformed system of

Card 1/3

equations are explicitly written down. The deviations (along the normal line) from the boundary cycle $\gamma(0)$ can be described by a periodic-unsteady process and the pertinent correlation function is written down here. The correlation function of the tangential component of the phase point deviations is then given. The dispersion of the tangential deviations increases with θ according to an exponential law. The diffusion-like character of the dispersion increase remains conserved also when returning to the argument t. The spectral intensity of the oscillations investigated here differs from the line spectrum of a periodic motion by the blurredness of the spectral lines. The author thanks Professor S. M. Rytov for having suggested the subject of the work under review and for very valuable advice given.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

PRESENTED: November 27, 1958, by M. A. Leontovich, Academician

GUDZENKO, L. I., Cand Phys-Math Sci -- "Fluctuations in self-oscillating ~~vibrating~~ systems" Mos, 1961. (Min of Higher and Sec Spec Ed USSR. Mos Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov, Dept ~~Geophys~~ of Radio-Phys) (KL, 8-61, 226)

S/141/61/004/002/006/017
E031/E313

16.8000 (1031, 1121, 1329)

AUTHOR: Gudzenko, L.I.

TITLE: The Generalisation of the Ergodic Theorem to Non-stationary Stochastic Processes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1961, Vol. 4, No. 2, pp. 267 - 274

TEXT: Even in experiments whose behaviour can be controlled, the determination of the statistical characteristics using means over the assembly is a very complicated task since a sufficiently complete and uniform distribution of the realisation over the assembly is necessary. The difficulties are even greater for the non-stationary process and hence it is of interest to investigate the possibility of calculating the characteristics from one realisation. To the author's knowledge, only the time means can be calculated from one realisation. The calculation of the time dependence of the characteristics of a periodic non-stationary process from one realisation (Ref. 5 - the author - Radiotekhnika i elektronika, 1959, Vol. 4, 1062) is only a direct consequence of the ergodic

Card 1/3

The Generalisation of ....

theorem. A method is proposed, which leads to a generalisation of the ergodic theorem to non-stationary stochastic processes of a more general type. As in Ref. 5, it is assumed that certain properties of the means of the statistic $z(t)$ are known (through the realisation), these occurring, for example, in the Langevin equations for the process itself, or in the Einstein-Fokker equations for the transition probabilities. The generalisation is formulated by assuming that $z(t)$ can be expanded in a series of known, bounded in each finite interval, functions and requiring that the correlation function be bounded and tend to zero uniformly with respect to t as $|\tau|$ increases. The functions which are reciprocal to those in terms of which $z(t)$ is expanded are uniformly bounded in any interval $-m < t < m$. Some examples are considered. In the first, the process $\zeta(t)$ is subject to the statistical equation $d\zeta/dt = k(t)\zeta(t) + f(t)$, where $k(t)$ and $f(t)$ are determined and fluctuating functions respectively. The second example deals with the problem of the case when only the asymptotic

The Generalisation of ....

behaviour of z(t) can be determined. The third problem is that of the motion of a representative point under the action of a small fluctuating force in the phase space of an autonomous oscillatory system. In the first approximation the function z(t) coincides with the function corresponding to the motion of the representative point of the dynamical system along a limit cycle. The method can be extended to cover the case of other statistical characteristics. This is illustrated by an example for the correlation function. The proof of the basic theorem of the paper is given in an appendix. There are 7 references: 6 Soviet and 1 non-Soviet.

ASSOCIATION: Fizicheskiy institut im. Lebedeva AN SSSR
(Physics Institute im. Lebedev of the AS USSR)

SUBMITTED October 8, 1960

Card 3/3

30682

9.3260 (1067, 1139)

141/61/004/004/011/024
140/E435

AUTHOR: Gudzenko, L.I.

TITLE: On the small fluctuation spectrum of steady-state oscillations in a general oscillator

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, v.4, no.4, 1961, 671-679

TEXT: The author shows that the spectrum of small fluctuations in a nonsinusoidal oscillator, neglecting small deviations from the normal to the limit cycle, consists of a broadening of the lines of the discrete spectrum present in the absence of fluctuations. The contours of all the spectral lines are identical and a formula is obtained for the half-width of the k-th line, agreeing with one obtained previously for certain special cases. It is shown that the present considerations are not valid if any of the oscillator parameters are close to the bifurcation point in the phase plane. The results are also inapplicable to relaxation oscillators. The general form of the analysis is indicated by Fig.1, where the broken lines indicate the zones of fluctuation about the limit cycle (full line) for noiseless operation. The reason for excluding cases close to a bifurcation point are shown in Fig.2

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E140/E435

and Fig.3, in which two modes of oscillation are possible for a small change in parameter values, and the generating point can jump from one trajectory to another under the influence of small fluctuations. Acknowledgments are expressed to S.M.Rytov for discussing the work. Ya.I.Khurgin is mentioned in the article. There are 4 figures and 7 references: all Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P.N.Lebedeva AN SSSR
(Physics Institute imeni P.N.Lebedev AS USSR)

SUBMITTED: January 6, 1961

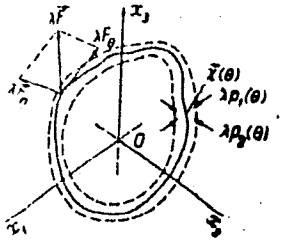

Fig.1.

Card 2/3

16.6200

40026

S/141/62/005/003/009/011
E140/E463

AUTHOR: Gudzenko, L.I.

TITLE: A statistical method for determining the characteristics of an uncontrollable oscillatory system

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, v.5, no.3, 1962, 572-587

TEXT: An uncontrollable oscillatory system is one not subject to intervention of the experimenter, such as periodic activity of the Sun and the regimes of variable stars in astrophysics, and the heart function in biology. The problem is to construct possible models (dynamic equations) of such systems and determine the parameters of such models from the statistical and experimental data. The class of models considered has a single degree of freedom and, for a certain region of initial conditions, approaches arbitrarily close to a periodic regime as t increases without limit. The function describing the acceleration of the system in the phase plane is assumed to be doubly differentiable with respect to the velocity and position. For these assumptions ~~the stable~~

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the stable limiting cycle is sought. Real systems are subject to statistical fluctuations, which make this task complicated. The author presents a detailed qualitative discussion of such fluctuations for systems with a peaked distribution, such as shown in Fig.1. The pedestal corresponds to thermal random fluctuations, the peak to slowly varying operating conditions. For example, in a container of gas under the influence of a heater, cooler and external gravitational field, the macroscopic fluctuations are due to convection currents, where the short correlation period of fluctuations is due to the small mean ratio of the convection component of velocity to the total velocity of a gas molecule. Based on these considerations, a procedure is given for obtaining the curve of the limiting cycle by successive approximations (Fig.2). Expressions are also given for obtaining the stiffness and the degree of nonisochronism of the cycle. There are 3 figures.

ASSOCIATION: Fizicheskiy institut im. P.N.Lebedeva AN SSSR
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SUBMITTED: October 28, 1961

A statistical method for ...

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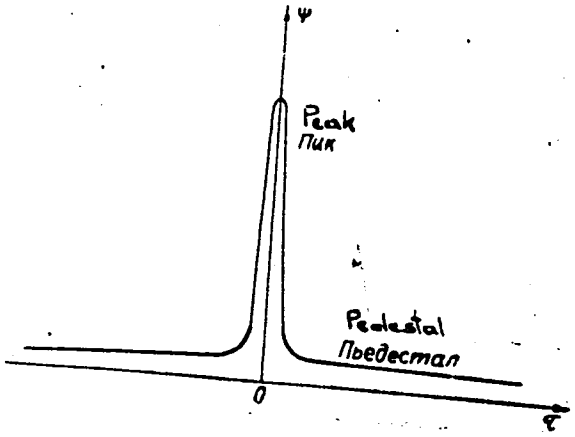

Fig.1.

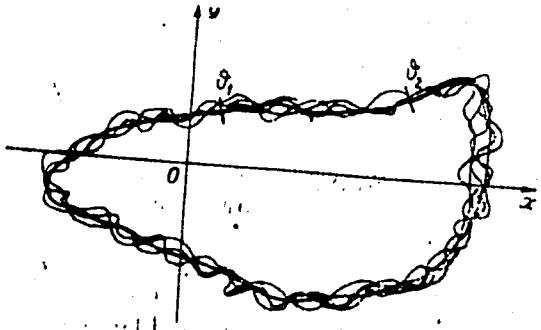

Fig.2.

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GUDZENKO, L.I.; CHERTOPRUD, V.Ye.

Analysis of periodic solar activity. Astron.zhur. 39 no.4:758-760 Jl.-Ag '62. (MIRA 15:7)

(Sunspots)

GUDZENKO, L. I.

AID Nr. 988-16 12 June

POSSIBLE CONNECTION BETWEEN CRYSTAL INHOMOGENEITIES AND THE LASER EFFECT (USSR)

Gudzenko, L. I. Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 4, Apr 1963, 1298-1301. S/056/63/044/004/025/044

Attention is drawn to a phenomenon in wave propagation in inhomogeneous media which may be operative in the functioning of a laser. The effect consists in an increase of the field concentration when a plane wave passes through a continuous laminar inhomogeneity. A rough analysis of wave propagation made with the use of simple formulas of geometric optics shows that even such a weak inhomogeneity can cause a manifold increase in energy density if the angle of wave incidence is close to the angle of total reflection. Because an increase of the energy density is usually accompanied by release of heat, the inhomogeneity-caused local overheating can markedly affect the inhomogeneity itself. In the case of an axial-mode laser crystal, in which the inhomogeneities can have only a laminar structure, the mechanism described may be connected with the fibrous character of the field distribution.

[ZL]

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GUDZENKO, L.I.; SHELEPIN, L.A.

Negative absorption in a nonequilibrium hydrogen plasma. Zhur. eksp. i teor. fiz. 45 no.5:1445-1449 N '63. (MIRA 17:1)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.

GUDZENKO, L.I.; CHERTOPRUD, V. Ye.

Some dynamic properties of the cyclic activity of the sun.
—> Astron. zhur. 41 no.4:697-706 Jl-Ag '64 (MIRA 17:8)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR i Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.

L 27856-65 ARG/EED-2/EWG(j)/EWA(k)/EWT(d)/FBD/FSF(h)/FSS-2/EWG(r)/EWT(l)/FBO/EWP(m)/FS(v)-3/EPA(sp)-2/EEC(k)-2/EWG(s)-2/EWP(f)/EWG(v)/EWP(c)/EWG(m)/EPR/EPA(v)-2/EEC(t)/T/EWG(a)/EWP(k)/EWP(h)/EPA(bb)-2/EWG(c)/FCS(k)/EWA(m)-2/EWA(h) Pn-4/Pz-6/Po-4/Pd-1/Pab-10/Pe-5/Pq-4/Pac-4/Pf-4/Ps-4/Pae-2/Peb/Pi-4/Pw-4/Pl-4 IJP(c) JWA/WG/BW/TT/WW/AT/GW

ACCESSION NR: AP5005445 S/0293/65/003/001/0167/0168

AUTHOR: Gudzenko, L. I.; Shelepin, L. A. 127

TITLE: Use of a plasma laser as an engine for a photon rocket B

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 1, 1965, 167-168

TOPIC TAGS: photon rocket, plasma laser, laser propulsion, photon engine, plasma amplifier, hydrogen plasma laser

ABSTRACT: The proposed rocket, intended for interplanetary space-flight at relativistic velocities, calls for a comparatively low-power laser whose emission would provide, after amplification in a quantum amplifier with a sufficiently high gain, the unidirectional stream of photons necessary to achieve thrust. A plasma laser without feedback (i.e., mirrorless) described by L. I. Gudzenko and L. A. Shelepin (ZhETF, 45, 1445, 1963) can be used as the amplifier. The dimensions of the amplifier can be comparatively small. The gain k in the intensity of the photon current is an exponential function of the effective length of the amplifier l and the linear gain of the active medium $\varkappa$, i.e., $k = \exp(\varkappa l)$. Thus, at $k = 10^{10}$ and $\varkappa = 0.1$ cm^{-1},

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L 27856-65

ACCESSION NR: AP5005445

$\ell \approx 2.3$ m. The formula for the mean thrust is given, and the value of thrust from one gram of hydrogen plasma as an active medium is computed as 10^4 kg. The authors suggest that the use of a plasma amplifier would circumvent many problems associated with the development of photon rockets. However, one difficulty, namely that of the construction of a sufficiently light and powerful source (of the order of millions of kilowatts) is not likely to be overcome at the present. Orig. art. has: 1 formula. [YK]

ASSOCIATION: none

SUBMITTED: 12Feb64 ENCL: 00 SUB CODE: EC, PR

NO REF SOV: 002 OTHER: 001 ATD PRESS: 3193

Card 2/2

L 52258-65 EEC-4/EWG(v)/EWT(1)/EEC(t) Pe-5/Pq-4 GW

ACCESSION NR: AP5010427 UR/0033/65/042/002/0267/0275

AUTHOR: Gudzenko, L. I.; Chertoprud, V. Yu.

TITLE: Model of cyclic solar activity

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 2, 1965, 267-275

TOPIC TAGS: sunspot formation model, solar activity cycle, sunspot, solar equator, differential equation, decomposition measure, magnetic field, convection zone

ABSTRACT: A model of sunspot formation has been developed. The formation of sunspots depending upon the cycle of solar activity is considered to be a belt consisting of cells which are capable of separating under convective action. These separated cells emerge on the solar surface as a group or as individual spots. A mathematical theory is developed for rectangular cells arranged in symmetric belts on both sides of the solar equator. The probability of separation of cells is expressed by a system of differential equations related to individual strips of the cell belt. By varying the equation system, one finds the moments of separation of cells. The ratio of cells departing from the belt in a given unit of time to the total number of cells in the belt is the measure of decomposition. The theory of decomposition agrees in some way with the spot formation during the solar activity

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